"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

2/2 026 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0106910

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ADHESIVE STRENGTH OF EPOXY RESIN ED-5 (I) (MODIFIED WITH DEG-I AND HARDENED WITH POLYETHYLENEPOLYAMINE), STAINLESS STEEL (II) PAIRS WAS STUDIED AS A FUNCTION OF THE HARDENING TEMP. (T) AND WITH REF. TO INTERNAL STRESSES ARISING DUE TO THE FORMATION OF ADHESIVE BONDS. THE ADHESIVE STRENGTH WAS PROPORTIONAL TO T, REACHING A MAX. OF 360 KG-CM PRIME2, WHEN THE INTERNAL STRESSES BROUGHT ABOUT PRESSURE PERPENDICULAR TO THE I-II INTERFACE. A PLOT OF ADHESIVE STRENGTH VS. TEMP. FOR THE I "DISSOLVED" IN II SYSTEM REVEALED THAT THE ADHESIVE STRENGTH DECLINED, REACHING A MIN. AT 100DEGREES AND THEN SUDDENLY INCREASED. A POSSIBLE EXPLANATION FOR THE ANOMALOUS BEHAVIOR WAS GIVEN. MEASUREMENTS OF INTERNAL STRESSES INDICATED THAT EFFECTIVE ADHESION MARKEDLY INCREASED WITH T AT LARGER THAN 100-200DEGREES, PRESUMABLY DUE TO THE FORMATION OF STRONGER ADHESIVE, AND POSSIBLY, CHEM. BONDS. AT LOWER TEMPS. THE ADHESION WAS INDEPENDENT OF T. THE COMPONENT OF THE ADHESIVE STRENGTH RELATED TO FRICTION I.E., THE NORMAL PRESSURE DUE TO INTERNAL STRESSES IN THE POLYMER AND THE STATIC FRICTION COEFF. OF THE I-II PAIR WERE DETD.

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USSR

UDC: 621.396.96:681.32

SIMONGAUZ, V. I.

"Digital Signal Processing to Obtain an Estimate of the Phase of the Modulating Function When the Carrier Frequency is Unknown"

Tr. Mosk. aviats. in-ta (Works of the Moscow Aviation Institute), 1970, vyp. 201, pp 61-87 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1G20)

Translation: In this paper, an earlier work by the author ("Radiotekhnika i elektronika", 1969, No 5) is extended to the case where the carrier frequency is unknown. The theory of digital processing of FM and AM signals is outlined. An algorithm is constructed for digital processing of readings of the phase of the carrier oscillation relative to a reference voltage. Four illustrations, two tables, bibliography of three titles. See also RZh-Kibernetika, 1969, 11G249. N. S.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

UDC: None

MERMANISHVILI, L. L., TIGILAURI, G. A., SIMONISHVILI, T. G., KVANTALIANI, G. A., and KOVSHOV, L. F.

"Device for Recording Information on Electrochemical Paper"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obrastsy, tovarnyye znaki, No 4, 1973, p 117, No 364003

Translation: The item contains number registers connected with decoders whose outputs are joined to shapers connected through AND circuits with the inputs of the recording unit, which is connected with scaling and synchronization units, distinguished in that, for the purpose of providing printed information in the form of combinations of points in two colors, it contains an automatic marking unit connected with the inputs of a nulling device for the number registers and with controlling inputs from each of the decoders.

The device of paragraph 1 above is distinguished in that the count input of the channel counter in the automatic marking unit is connected, through one of the delay lines, to one of the AND and OR circuits respectively, the outputs of which are connected through a decoder to the second inputs of the AND circuits, whose outputs are connected with the other inputs of the OR circuits.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

ACCESSION NR: AP4036810 S/0286/64/000/009/0035/0035

AUTHOR: Tavadze, F. N.; Simonishvili, T. V.

TITLE: Heat-resistant steel ANG-15. Class 18, No. 161180

SOURCE: Byul. izobr. i tovar. znakov, no. 9, 1964, 35

TOPIC TAGS: heat resistant steel, ANG-15 steel, alloy steel

ABSTRACT: Heat-resistant steel ANG-15, containing chromium, nickel, manganese, niobium, vanadium, silicon, is distinguished by increased mechanical properties. Components are contained in the following percentages: carbon, 0.4-0.6; chromium, 14-16; nickel, 13-15; manganese, 8-10; niobium, 0.3-0.5; vanadium, 0.4-0.6; silicon, up to 0.5; tungsten, 4.5-5.5; aluminum, 0.4-0.6; sulphur, up to 0.03; nitrogen, up to 0.15; phosphorus, up to 0.03.

ASSOCIATION: none

SUBMITTED: 02Nov62 ENCL: 00 SUB CODE: MM

NO REF SOV: 000 OTHER: 000

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

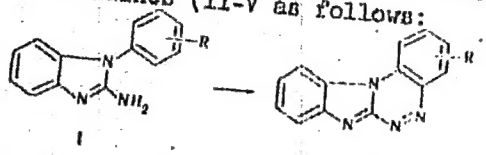
UDC 547.785.5.556.3

KOLODYAZHNAYA, S. N., SIMONOV, A. M., ZHELTIKOVA, N. N., and POZHARSKIY, A. F.,
Rostov State University, Rostov-on-Don

"Intramolecular Nitrogen Bonding in a Series of 1-Substituted 2-Aminobenzimidazols"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, 5, May 1973, pp 714-715

Abstract: Compounds of the type 1-aryl-2-aminobenzimidazol (I) form, in addition to the intermolecular bonds, intramolecular nitrogen bonding which occurs in the o-position of N-aryl radical and leads to the formation of dibenz [a,g] imidazo [2,1-C][1,2,4,] triazines (II-V as follows:



I

II-V

The ring closure occurs smoothly in concentrated H_3PO_4; the presence of H_2SO_4 results in the formation of 5- and 6-azobenzimidazols. A methyl group in the m-position on the N-aryl radical facilitates the ring closure. Elemental analysis, IR data, physical constants, and molecular weights are given.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

UDC 547.785.5'821.07

POZHARSKIY, A. F., KUZ'MENKO, V. V., KOLODYAZHNYY, YU. V., SIMONOV, A. M.,
Rostov State University, Rostov-na-Donu

"Relative Reactivity of the Pyrindine and Benzimidazole Systems in the Chichibabin Reaction"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 9, 1972, pp 1252-1263

Abstract: Some 1- α (or γ)-pyridiyl and 1- α (or γ)-pyridylethyl-benzimidazoles were synthesized and their reactivity to methyl iodide and sodamide was studied. The results are discussed from the point of view of basicity, the magnitude of the dipole moments, the mutual effect of heterorings and the distribution of electron density in them, calculated or estimated from the relative position of the chemical shifts in the paramagnetic resonance spectra. The benzimidazole system enters into the Chichibabin reaction appreciably more easily than the pyridine system. On the basis of the paramagnetic resonance spectral data for bases and cations of pyridine and benzimidazole it is proposed that this phenomenon arises from the high degree of polarizability of the C=N bond of the benzimidazole by comparison with the C=N bond of the pyridine on their coordination with $NaNH_2$. The protonation point of compounds I and II

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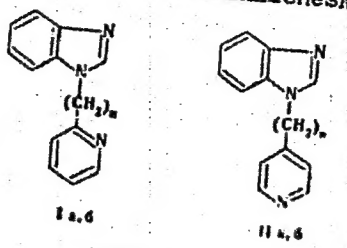
"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

POZHARSKIY, A. F., et al., Khimiya Geterotsiklicheskikh Soyedineniy, No 9, 1972, pp 1252-1263



I a,б

II a,б

a n=0; б n=2

the nature of the interaction of the imidazole and pyridine rings in N-pyridylbenzimidazoles and the reaction of N-pyridylbenzimidazoles to sodium amide are discussed. The procedures for synthesizing a number of the indicated compounds, the method of measuring the ionization constants, taking the paramagnetic resonance spectra, performing the quantummechanical calculations and determining the dipole moments are described.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

UDC 547.785.5'786.07

TSUPAK, Ye. B., CHUB, N. K., SIMONOV, A. M., and MIROSHNICHENKO, N. M., Rostov State University, Rostov-on-Don

"Studies in the Field of Benzimidazole Derivatives. XXVIII. Synthesis of Some 3-/2'-Benzimidazolyl/isoxazoles"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 6, Jun 72, pp 812-815

Abstract: By the chlorination of the oximes of 1-methyl-2-formylbenzimidazole and of its 5-methyl and 5-nitro derivatives, the hydrochlorides of the corresponding 2-benzimidazolylmethylhydroxamoyl chlorides were synthesized. Nitration of the oximes gave benzimidazolylmethylnitrolic acids. The products of the two conversions reacted with acetyl- or benzoylacetone in the presence of bases, forming 1', 5'-substituted 3-/2-benzimidazolyl/-4-acyl-5-methylisoxazoles.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

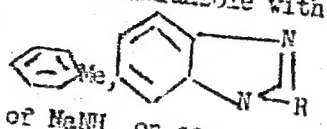
UDC 547.781.5.785.5

FILIPSKIKH, T. P., POZHARSKIY, A. F., KOROLEVA, V. N., SIMONOV, A. M., and ZVEZDINA, E. A., Rostov State University, Rostov-on-Don

"Derivatives of Imidazole Containing Potentially Labile Groups at the N_1 Atom. VI. Some 2-Amino Derivatives of 1-Aralkyl- and 1-Methoxymethylbenzimidazoles"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 6, Jun 72, pp 809-811

Abstract: By reacting benzimidazole with substituted benzyl chlorides and the Ag salt of benzimidazole with benzhydrylchloride, 1-aralkylbenzimidazoles



(I) were obtained, in which R = $-CHPh_2$. By the action of $NaNH_2$ on compounds I, an amino group was introduced in position 2 of the benzimidazole nucleus. In this manner, the 1-aralkyl-2-aminobenzimidazoles (II) derived from I were synthesized. By reacting the Na salt of 2-aminobenzimidazole with methoxymethyl chloride, 1-methoxymethyl-2-aminobenzimidazole (III) was prepared. Compounds II-III were required for the generation of highly reactive 2-aminobenzimidazole anions by the reductive cleavage of the N-R bond with Na in liquid NH_3.

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Polymers and Polymerization

USSR

UDC 678.049.9

VASILENOK, YU. I., KONOPLEV, B. A., LAGUNOVA, V. N., SIMONOV, A. M., POSHARSKIY, A. F., AVEZDINA, E. A., and ADREYCHIKOV, YU. P.

"Novel Antistatic Agents for Plastic"

Moscow, Plasticheskiye Massy, No 10, 1971, pp 11-13

Abstract: Results are reported of a study of the antistatic efficiency of imidazolinium bromohydrates, sodium salts of imidazolinium hydroxides, and adipic salts of imidazolinium and pyridinium after deposition on the surface of low density polyethylene, high density polyethylene, block polyethylene, and polymethylmetacrylate as well as with introduction of these agents directly into the polymer mass. It has been determined that deposition of these substances on the surfaces of polymers decreases the specific surface resistance at 20± 2°C and relative humidity 65 ± 3%. The sodium salts of the substituted imidazolium hydroxides are especially effective in lowering the surface resistance. Addition of 1-4 weight-% of the investigated antistatic agent directly into the polymer mass has practically no effect on the mechanical properties of low density polythylene; high density polythylene shows a lower relative elongation at the tearing point after addition of the antistatic agents.

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USSR

UDC 547.859.7'785.5:543.4.6

POZHARSKIY, A. F., KASHPAROV, I. S., ANDRICHIKOV, YU. P., BURYAK, A. I., KONSTANTINCHENKO, A. A., and SIMONOV, A. M., Rostov-on-Don State University

"Heterocyclic Analogs of Pleiadiene. VII. Tautomerism of 2-Amino-derivatives of Perimidine, Acenaphthenoperimidine, and Their Imidazole Analogs"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 6, Jun 71, pp 807-813

Abstract: Analysis of the ionization constants, infrared and ultraviolet spectral data and of quantum mechanical calculations showed that 2-aminoperimidines and 2-aminoacenaphthenoperimidines show a greater tendency toward a tautomeric equilibrium shift in the direction of the imino form than the 2-aminoderivatives of 4,5-diphenylimidazole, benzimidazole, and angular or linear naphthimidazoles. This tendency is believed to be connected with their π-electron structure.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

UDC 547.831'781.1

KHRISTICH, B. I., KRUCHININ, V. A., POZHARSKIY, A. F., and SIMONOV, A. M.,
Rostov-on-Don State University

"Effect of the Basicity of Aza-groups on the Course of Nucleophilic Substitution in Imidazo [4,5-f] quinolines"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 6, Jun 71, pp 814-817.

Abstract: Imidazo [4,5-f] quinoline was selected as a model compound becuase it contains two potentially active centers with respect to the nucleophilic reagents such as phenyllithium, sodamide, - namely positions 2 and 7. It was established that the quinoline nucleus is more reactive towards these reagents than the imidazole nucleus. An assumption was stated that the course of nucleophilic attacks is principally determined by the relative basicity of the aza group. The nucleophilic attack occurs at the carbon atom adjacent to the more basic nitrogen atom. This assumption was supported by molecular orbital calculations and pK_a values. The positive charge or the energy of anionic localization on C_2- and C_7- atoms in a neutral molecule appear to be of no consequence to the course of nucleophilic attack.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

1/2 011 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--CHELATE COMPOUNDS OF ARENEAZO,2,IMIDAZOLES. NEW EXAMPLE OF COMPLEXES WITH A METAL CHELATE JUNCTION POINT OF THE M PLUS 4N TYPE -U-

AUTHOR-(05)-GARNOVSKIY, A.D., KUZNETSOVA, L.I., ANDREYCHIKOV, YU.P., OSIPOV, O.A., SIMONOV, A.M.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSH. KHIM. 1970, 40(3), 710-11

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANIC AZOLE COMPOUND, ORGANIC COMPLEX COMPOUND, ACETATE, DIPOLE MOMENT, BROMINATED ORGANIC COMPOUND, HETEROCYCLIC OXYGEN COMPOUND, BENZENE DERIVATIVE, MOLECULAR STRUCTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/2022 STEP NO--UR/0079/70/040/003/0710/0711

CIRC ACCESSION NO--AP0132282

UNCLASSIFIED

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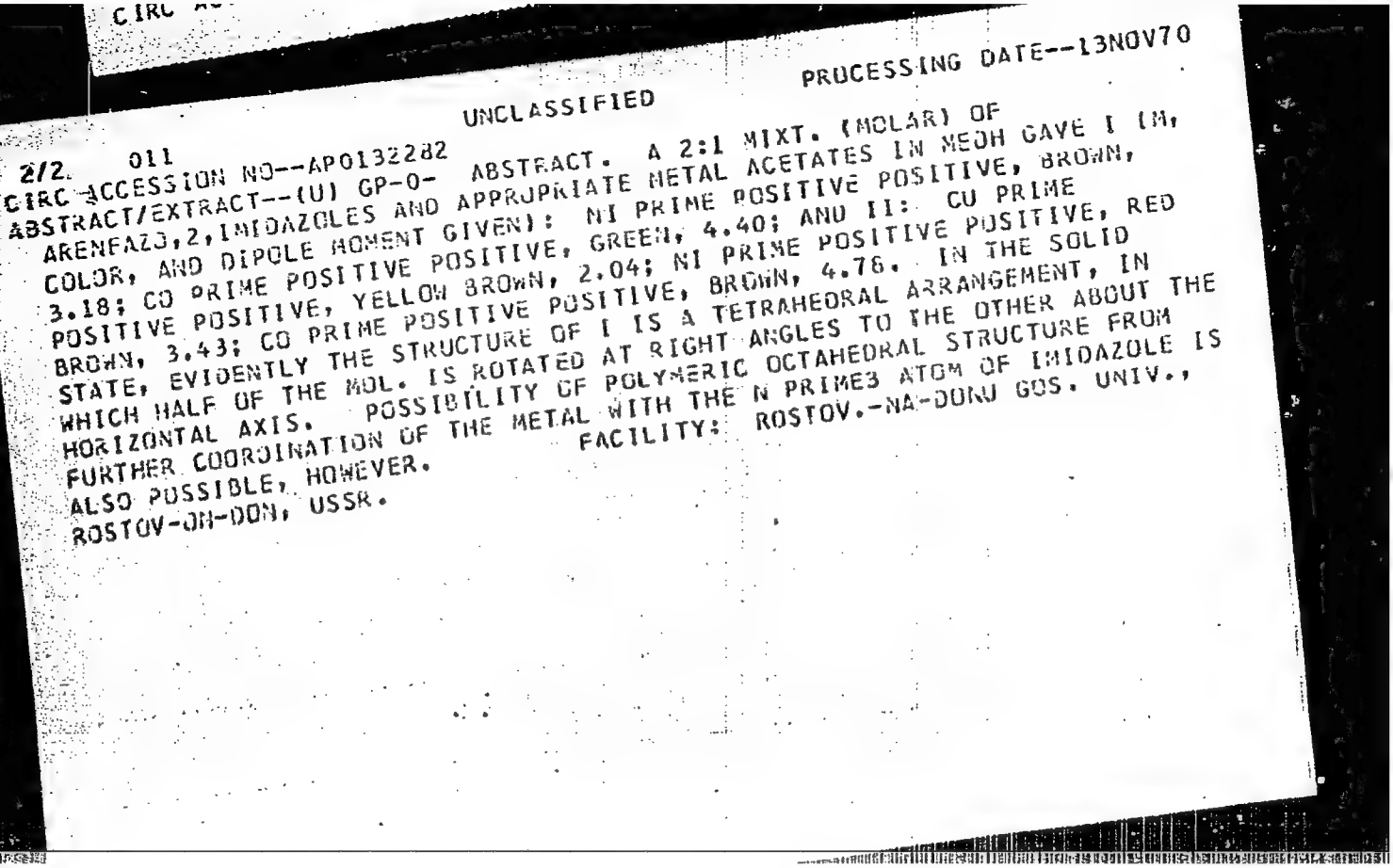

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UNCLASSIFIED PROCESSING DATE--13NOV70

2/2. 011
CIRC ACCESSION NO--AP0132282
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A 2:1 MIXT. (MOLAR) OF ARENEAZO,2,IMIDAZOLES AND APPROPRIATE METAL ACETATES IN MEOH GAVE I (M, COLOR, AND DIPOLE MOMENT GIVEN): NI PRIME POSITIVE POSITIVE, BROWN, 3.18; CO PRIME POSITIVE POSITIVE, GREEN, 4.40; AND II: CU PRIME POSITIVE POSITIVE, YELLOW BROWN, 2.04; NI PRIME POSITIVE POSITIVE, RED BROWN, 3.43; CO PRIME POSITIVE POSITIVE, BROWN, 4.76. IN THE SOLID STATE, EVIDENTLY THE STRUCTURE OF I IS A TETRAHEDRAL ARRANGEMENT, IN WHICH HALF OF THE MOL. IS ROTATED AT RIGHT ANGLES TO THE OTHER ABOUT THE HORIZONTAL AXIS. POSSIBILITY OF POLYMERIC OCTAHEDRAL STRUCTURE FROM FURTHER COORDINATION OF THE METAL WITH THE N PRIME3 ATOM OF IMIDAZOLE IS ALSO POSSIBLE, HOWEVER.
FACILITY: ROSTOV.-NA-DONU GOS. UNIV., ROSTOV-ON-DON, USSR.

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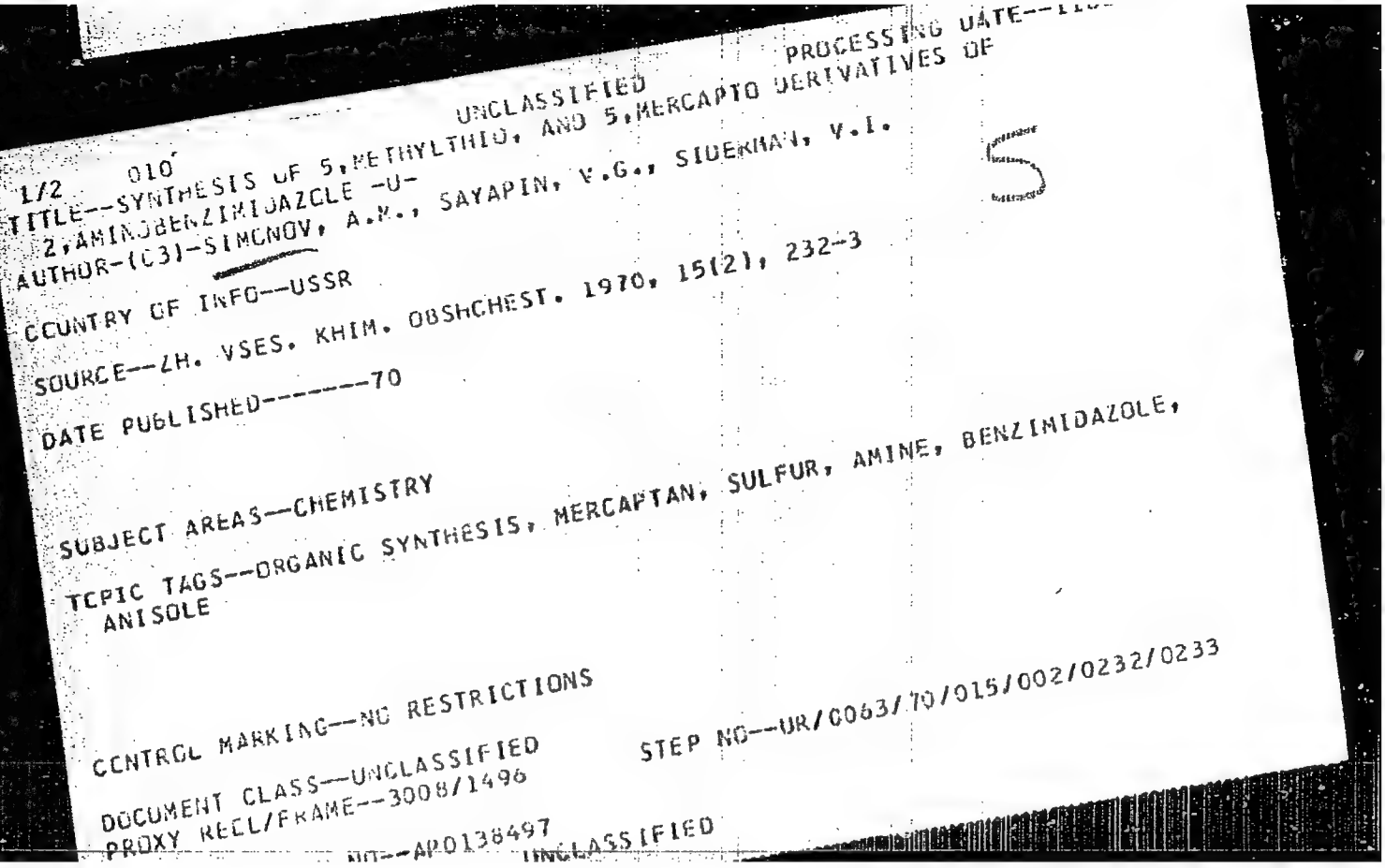

UNCLASSIFIED PROCESSING DATE--

1/2 010

TITLE--SYNTHESIS OF 5,METHYLTHIO, AND 5,MERCAPTO DERIVATIVES OF 2,AMINOBENZIMIDAZOLE -U-

AUTHOR-(03)-SIMONOV, A.M., SAYAPIN, V.G., SIDENKAN, V.I.

COUNTRY OF INFO--USSR

SOURCE--ZH. VSES. KHIM. OBSHCHEST. 1970, 15(2), 232-3

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANIC SYNTHESIS, MERCAPTAN, SULFUR, AMINE, BENZIMIDAZOLE, ANISOLE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED STEP NO--UR/0063/70/015/002/0232/0233

PROXY REEL/FRAME--3008/1496

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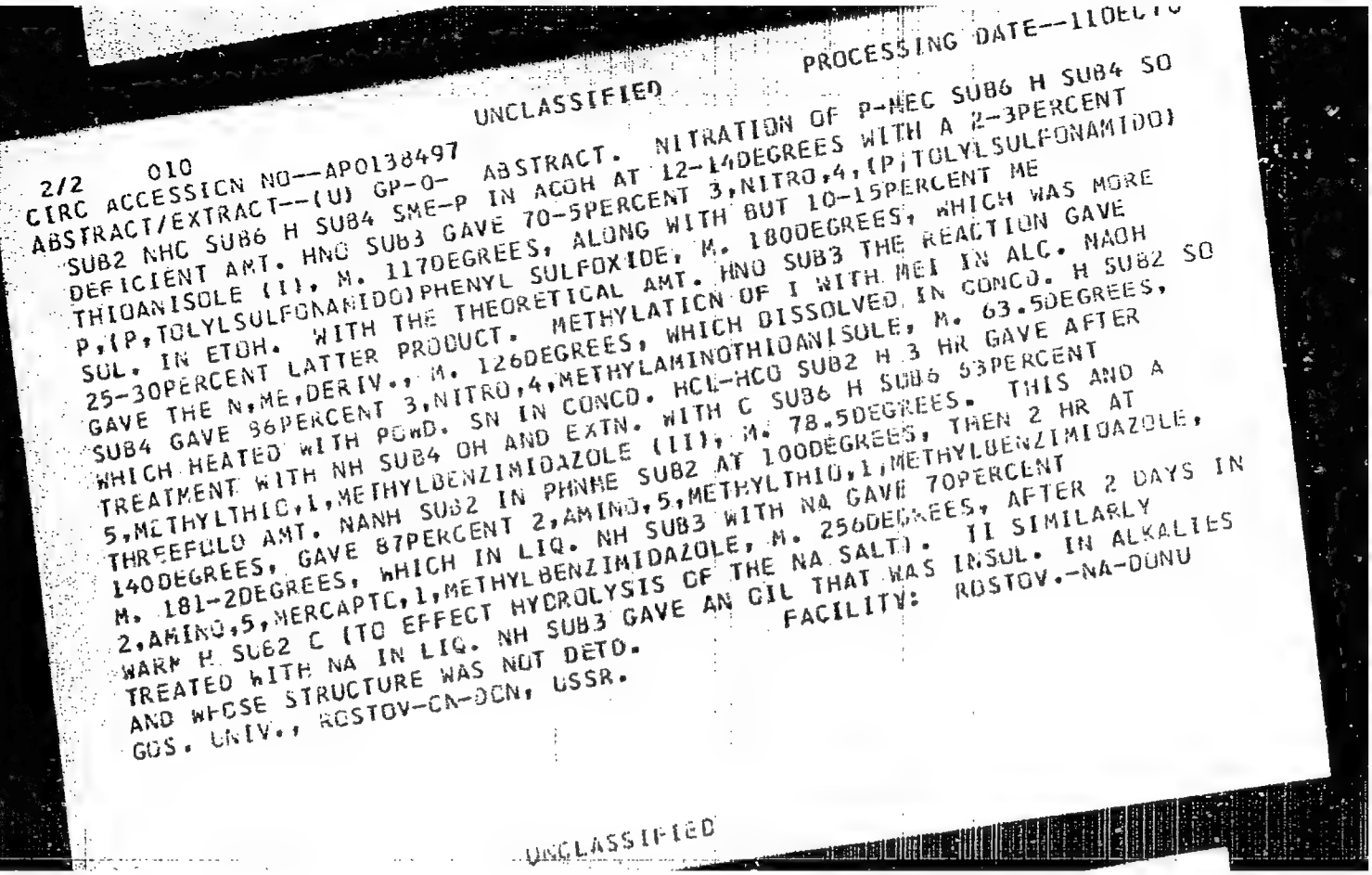

UNCLASSIFIED PROCESSING DATE--11DEC70

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CIRC ACCESSION NO--AP0138497

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. NITRATION OF P-NEC SUB6 H SUB4 SO SUB2 NHC SUB6 H SUB4 SME-P IN ACOH AT 12-14DEGREES WITH A 2-3PERCENT DEFICIENT AMT. HNO SUB3 GAVE 70-5PERCENT 3,NITRO,4,(P)TOLYLSULFONAMIDO) THIOANISOLE (I), M. 117DEGREES, ALONG WITH BUT 10-15PERCENT ME P,(P,TOLYLSULFONAMIDO)PHENYL SULFOXIDE, M. 180DEGREES, WHICH WAS MORE SOL. IN ETOH. WITH THE THEORETICAL AMT. HNO SUB3 THE REACTION GAVE 25-30PERCENT LATTER PRODUCT. METHYLATION OF I WITH MEI IN ALC. NAOH GAVE THE N,ME,DERIV., M. 126DEGREES, WHICH DISSOLVED IN CONCD. H SUB2 SO SUB4 GAVE 86PERCENT 3,NITRO,4,METHYLAMINOTHIOANISOLE, M. 63.5DEGREES, WHICH HEATED WITH POWD. SN IN CONCD. HCL-HCO SUB2 H 3 HR GAVE AFTER TREATMENT WITH NH SUB4 OH AND EXTN. WITH C SUB6 H SUB6 53PERCENT 5,METHYLTHIO,1,METHYLBENZIMIDAZOLE (II), M. 78.5DEGREES. THIS AND A THREEFOLD AMT. NANH SUB2 IN PHNME SUB2 AT 100DEGREES, THEN 2 HR AT 140DEGREES, GAVE 87PERCENT 2,AMINO,5,METHYLTHIO,1,METHYLBENZIMIDAZOLE, M. 181-2DEGREES, WHICH IN LIQ. NH SUB3 WITH NA GAVE 70PERCENT 2,AMINO,5,MERCAPTO,1,METHYLBENZIMIDAZOLE, M. 256DEGREES, AFTER 2 DAYS IN WARM H SUB2 O (TO EFFECT HYDROLYSIS OF THE NA SALT). II SIMILARLY TREATED WITH NA IN LIQ. NH SUB3 GAVE AN OIL THAT WAS INSOL. IN ALKALIES AND WHOSE STRUCTURE WAS NOT DETD.

FACILITY: ROSTOV.-NA-DONU GOS. UNIV., ROSTOV-ON-DON, USSR.

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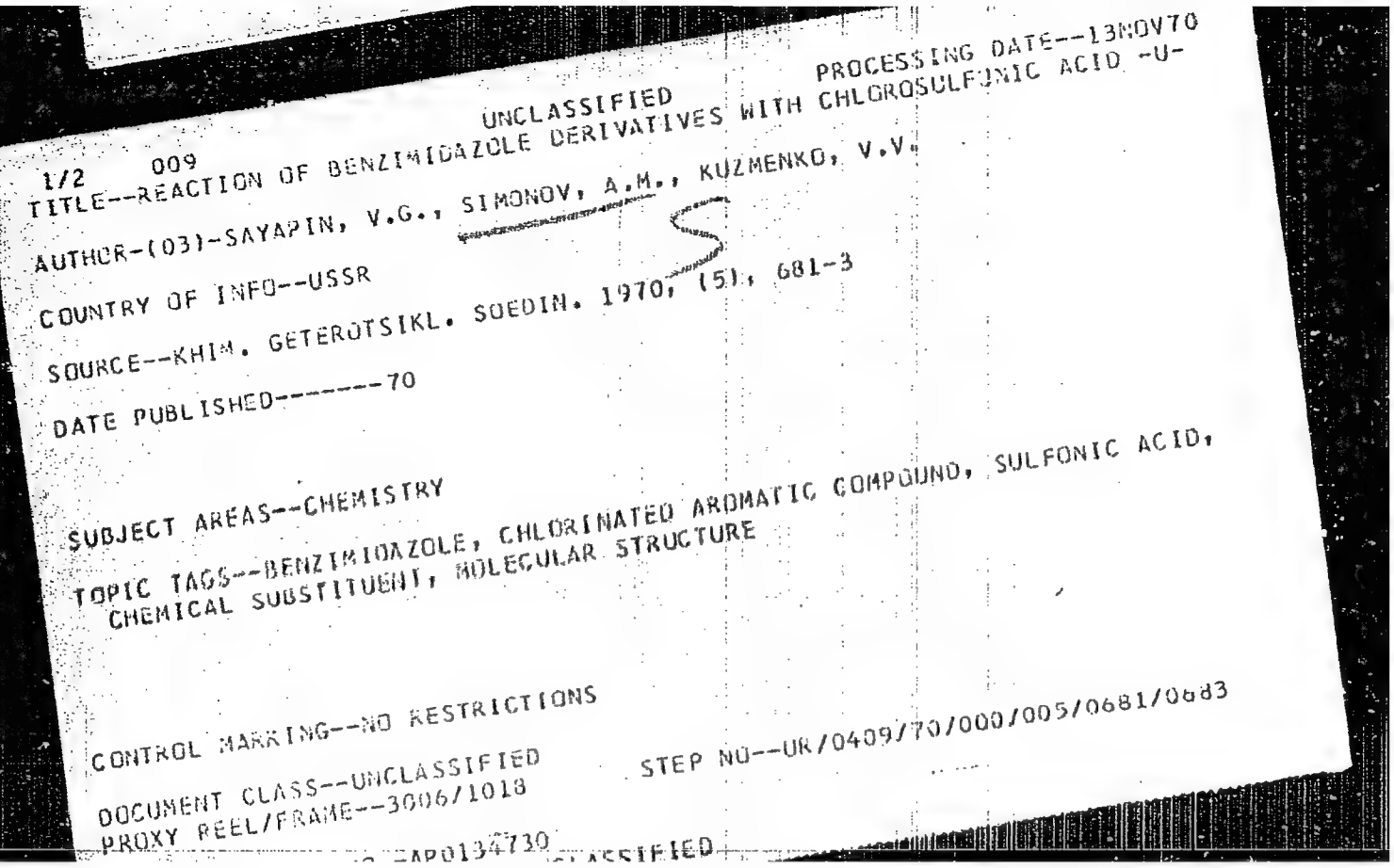

1/2 009 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--REACTION OF BENZIMIDAZOLE DERIVATIVES WITH CHLOROSULFONIC ACID -U-

AUTHOR-(03)-SAYAPIN, V.G., SIMONOV, A.M., KUZMENKO, V.V.

COUNTRY OF INFO--USSR

SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970, (5), 681-3

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--BENZIMIDAZOLE, CHLORINATED AROMATIC COMPOUND, SULFONIC ACID, CHEMICAL SUBSTITUENT, MOLECULAR STRUCTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED STEP NO--UR/0409/70/000/005/0681/0683

PROXY REEL/FRAME--3006/1018

CAP0134730 UNCLASSIFIED

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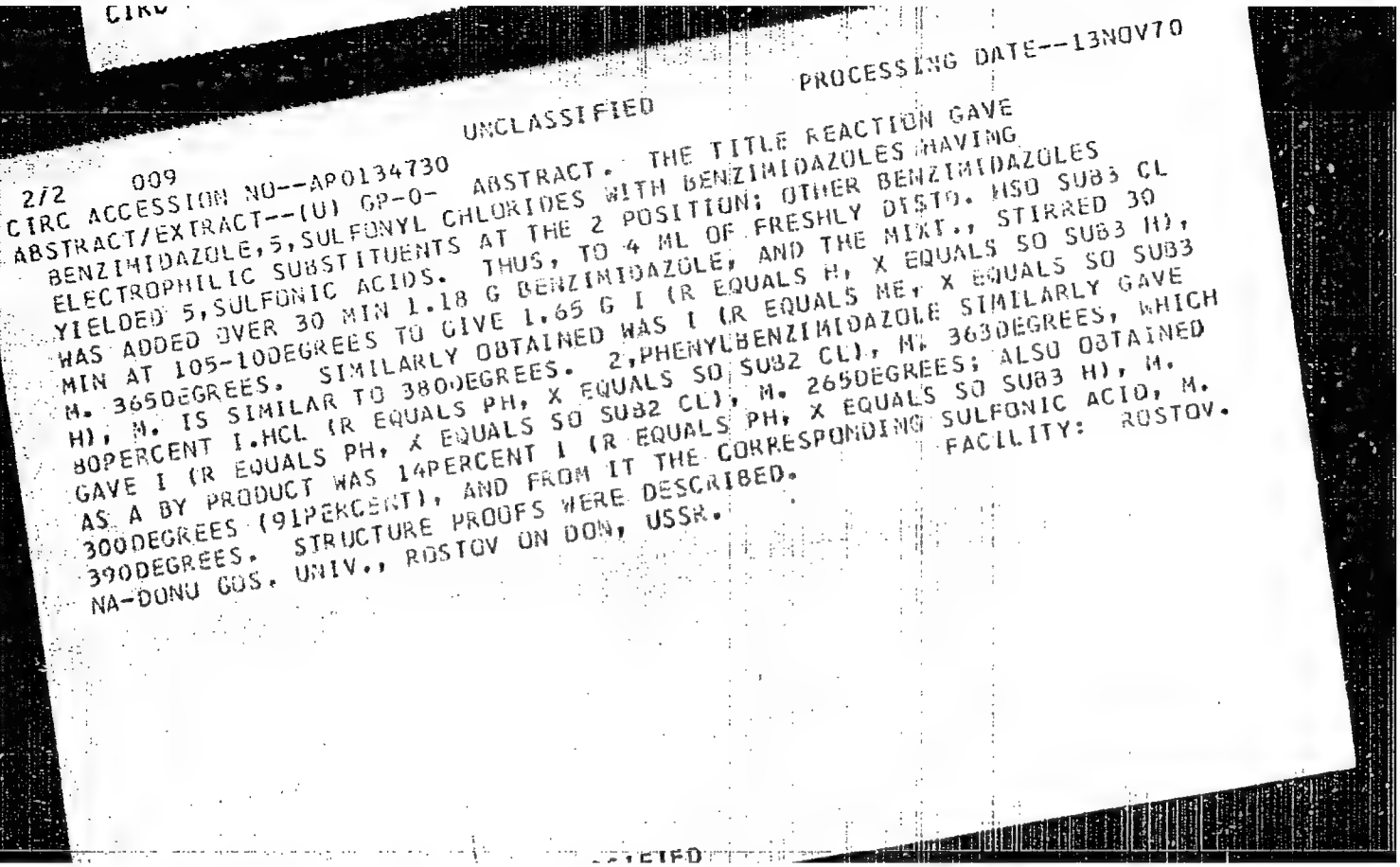

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UNCLASSIFIED PROCESSING DATE--13NOV70

2/2 009

CIRC ACCESSION NO--AP0134730

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE REACTION GAVE BENZIMIDAZOLE,5,SULFONYL CHLORIDES WITH BENZIMIDAZOLES HAVING ELECTROPHILIC SUBSTITUENTS AT THE 2 POSITION; OTHER BENZIMIDAZOLES YIELDED 5,SULFONIC ACIDS. THUS, TO 4 ML OF FRESHLY DISTD. HSO SUB3 CL WAS ADDED OVER 30 MIN 1.18 G BENZIMIDAZOLE, AND THE MIXT., STIRRED 30 MIN AT 105-100DEGREES TO GIVE 1.65 G I (R EQUALS H, X EQUALS SO SUB3 H), M. 365DEGREES. SIMILARLY OBTAINED WAS I (R EQUALS ME, X EQUALS SO SUB3 H), M. IS SIMILAR TO 380DEGREES. 2,PHENYLBENZIMIDAZOLE SIMILARLY GAVE 80PERCENT I.HCL (R EQUALS PH, X EQUALS SO SUB2 CL), M. 363DEGREES, WHICH GAVE I (R EQUALS PH, X EQUALS SO SUB3 H), M. IS SIMILAR TO 300DEGREES (91PERCENT), AND FROM IT THE CORRESPONDING SULFONIC ACID, M. AS A BY PRODUCT WAS 14PERCENT I (R EQUALS PH, X EQUALS SO SUB2 CL), M. 265DEGREES; ALSO OBTAINED 390DEGREES. STRUCTURE PROOFS WERE DESCRIBED.

FACILITY: ROSTOV. NA-DONU GOS. UNIV., ROSTOV ON DON, USSR.

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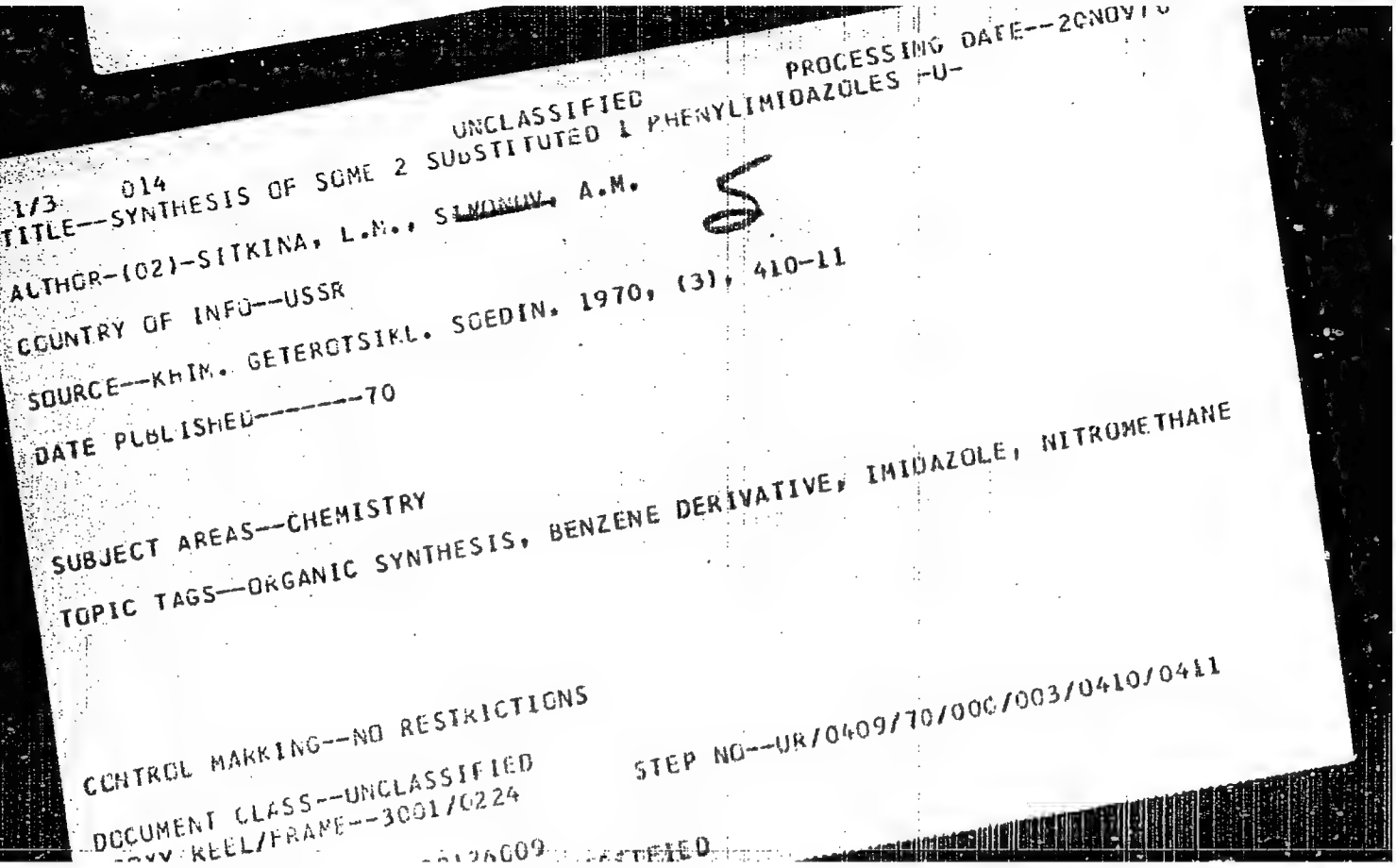

1/3 014 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--SYNTHESIS OF SOME 2 SUBSTITUTED 1 PHENYLIMIDAZOLES -U-

AUTHOR-(02)-SITKINA, L.N., SIMONOV, A.M.

COUNTRY OF INFO--USSR

SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970, (3), 410-11

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANIC SYNTHESIS, BENZENE DERIVATIVE, IMIDAZOLE, NITROMETHANE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED STEP NO--UR/0409/70/000/003/0410/0411

PROX REEL/FRAME--3001/0224

[illegible]26009 UNCLASSIFIED

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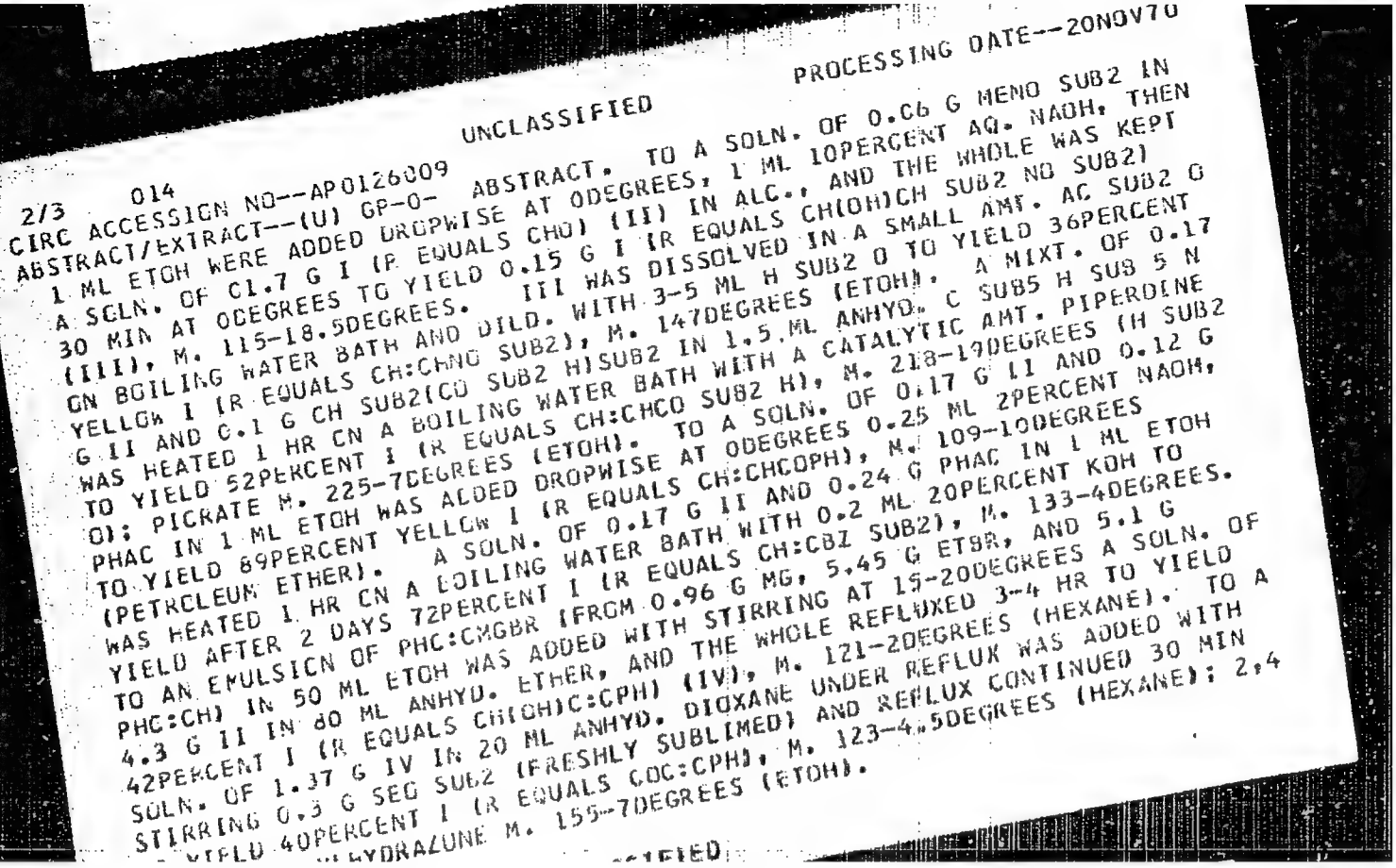

UNCLASSIFIED PROCESSING DATE--20NOV70

2/3 014
CIRC ACCESSION NO--AP0126009
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TO A SOLN. OF 0.06 G MENO SUB2 IN 1 ML ETOH WERE ADDED DROPWISE AT ODEGREES, 1 ML 10PERCENT AQ. NAOH, THEN A SOLN. OF C1.7 G I (R EQUALS CHO) (II) IN ALC., AND THE WHOLE WAS KEPT 30 MIN AT ODEGREES TO YIELD 0.15 G I (R EQUALS CH(OH)CH SUB2 NO SUB2) (III), M. 115-18.5DEGREES. III WAS DISSOLVED IN A SMALL AMT. AC SUB2 O ON BOILING WATER BATH AND DILD. WITH 3-5 ML H SUB2 O TO YIELD 36PERCENT YELLOW I (R EQUALS CH:CHNO SUB2), M. 147DEGREES (ETOH). A MIXT. OF 0.17 G II AND 0.1 G CH SUB2(CO SUB2 H)SUB2 IN 1.5 ML ANHYD. C SUB5 H SUB 5 N WAS HEATED 1 HR ON A BOILING WATER BATH WITH A CATALYTIC AMT. PIPERDINE TO YIELD 52PERCENT I (R EQUALS CH:CHCO SUB2 H), M. 218-19DEGREES (H SUB2 O); PICRATE M. 225-7DEGREES (ETOH). TO A SOLN. OF 0.17 G II AND 0.12 G PHAC IN 1 ML ETOH WAS ADDED DROPWISE AT ODEGREES 0.25 ML 2PERCENT NAOH, TO YIELD 89PERCENT YELLOW I (R EQUALS CH:CHCOPH), M. 109-10DEGREES (PETROLEUM ETHER). A SOLN. OF 0.17 G II AND 0.24 G PHAC IN 1 ML ETOH WAS HEATED 1 HR ON A BOILING WATER BATH WITH 0.2 ML 20PERCENT KOH TO YIELD AFTER 2 DAYS 72PERCENT I (R EQUALS CH:CBZ SUB2), M. 133-4DEGREES. TO AN EMULSION OF PHC:CHGBR (FROM 0.96 G MG, 5.45 G ETBR, AND 5.1 G PHC:CH) IN 50 ML ETOH WAS ADDED WITH STIRRING AT 15-20DEGREES A SOLN. OF 4.3 G II IN 80 ML ANHYD. ETHER, AND THE WHOLE REFLUXED 3-4 HR TO YIELD 42PERCENT I (R EQUALS CH(OH)C:CPH) (IV), M. 121-20EGREES (HEXANE). TO A SOLN. OF 1.37 G IV IN 20 ML ANHYD. DIOXANE UNDER REFLUX WAS ADDED WITH STIRRING 0.3 G SEC SUB2 (FRESHLY SUBLIMED) AND REFLUX CONTINUED 30 MIN TO YIELD 40PERCENT I (R EQUALS COC:CPH), M. 123-4.5DEGREES (HEXANE); 2,4 HYDRAZONE M. 155-7DEGREES (ETOH).

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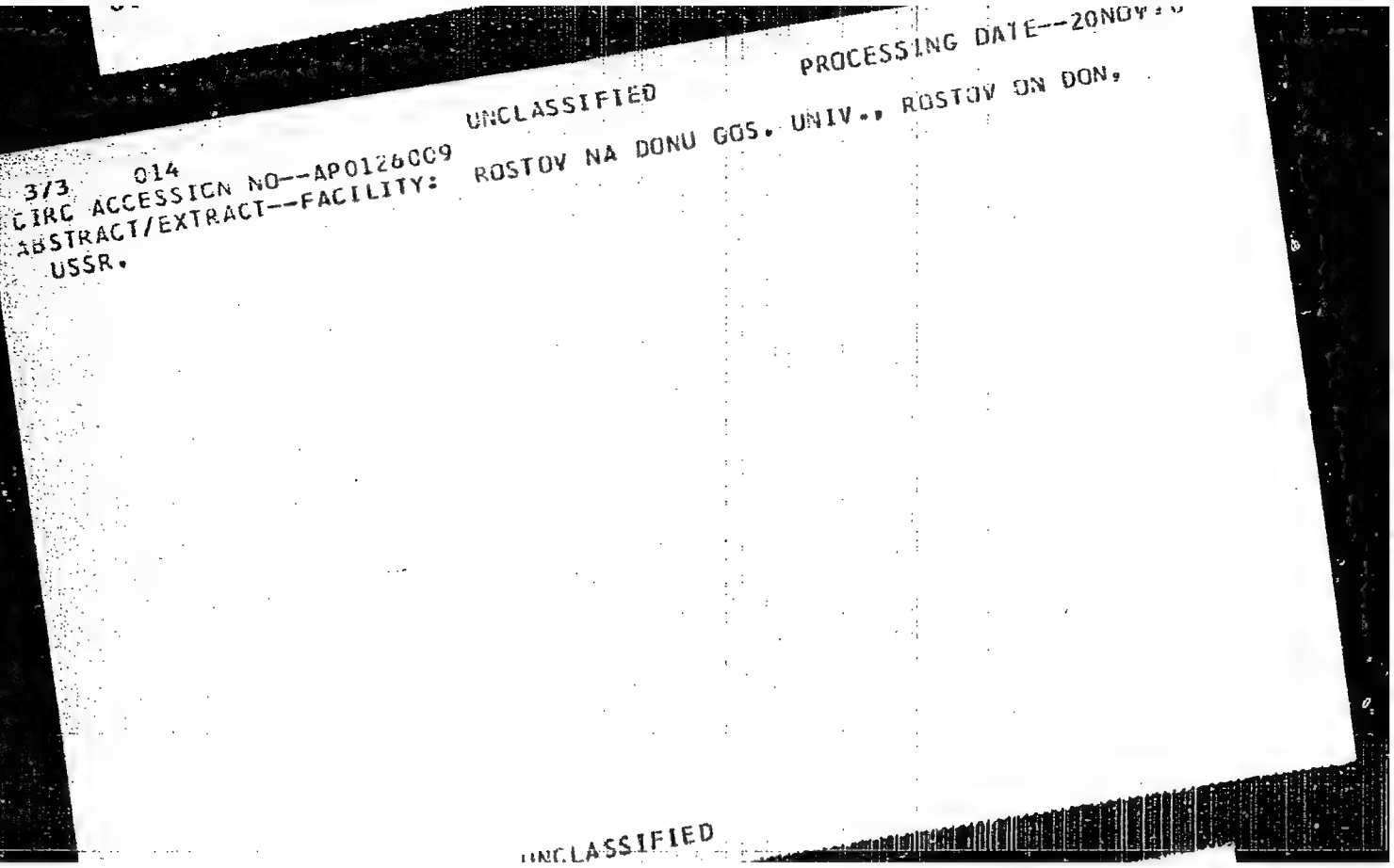

UNCLASSIFIED PROCESSING DATE--20NOV

3/3 014
CIRC ACCESSION NO--AP0126009
ABSTRACT/EXTRACT--FACILITY: ROSTOV NA DONU GOS. UNIV., ROSTOV ON DON,
USSR.

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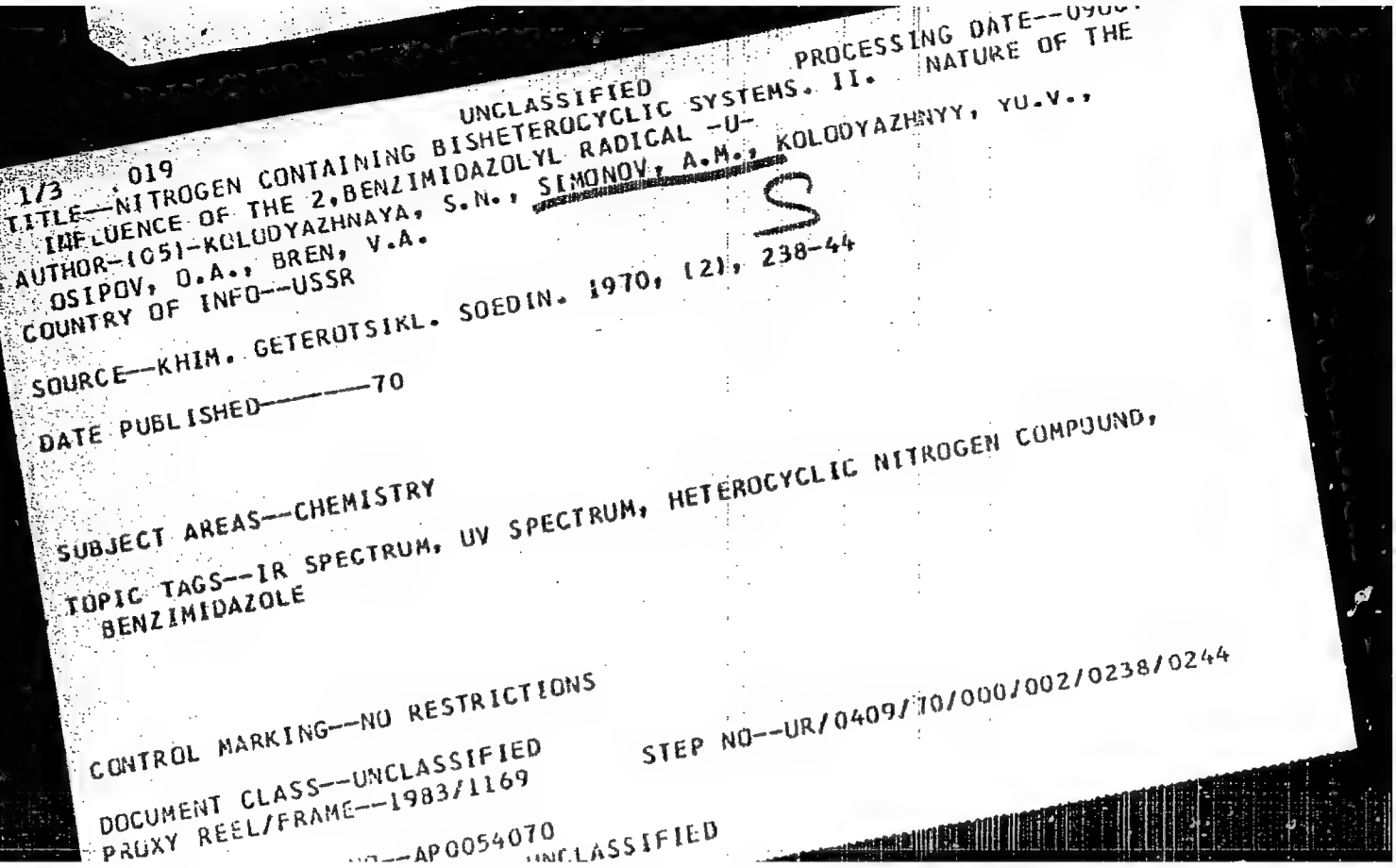

UNCLASSIFIED PROCESSING DATE--0906

1/3 019

TITLE--NITROGEN CONTAINING BISHETEROCYCLIC SYSTEMS. II. NATURE OF THE INFLUENCE OF THE 2,BENZIMIDAZOLYL RADICAL -U-

AUTHOR-(05)-KOLODYAZHNAYA, S.N., SIMONOV, A.M., KOLODYAZHNYY, YU.V., OSIPOV, O.A., BREN, V.A.

COUNTRY OF INFO--USSR

SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970, (2), 238-44

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--IR SPECTRUM, UV SPECTRUM, HETEROCYCLIC NITROGEN COMPOUND, BENZIMIDAZOLE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED STEP NO--UR/0409/70/000/002/0238/0244

PROXY REEL/FRAME--1983/1169

--AP0054070

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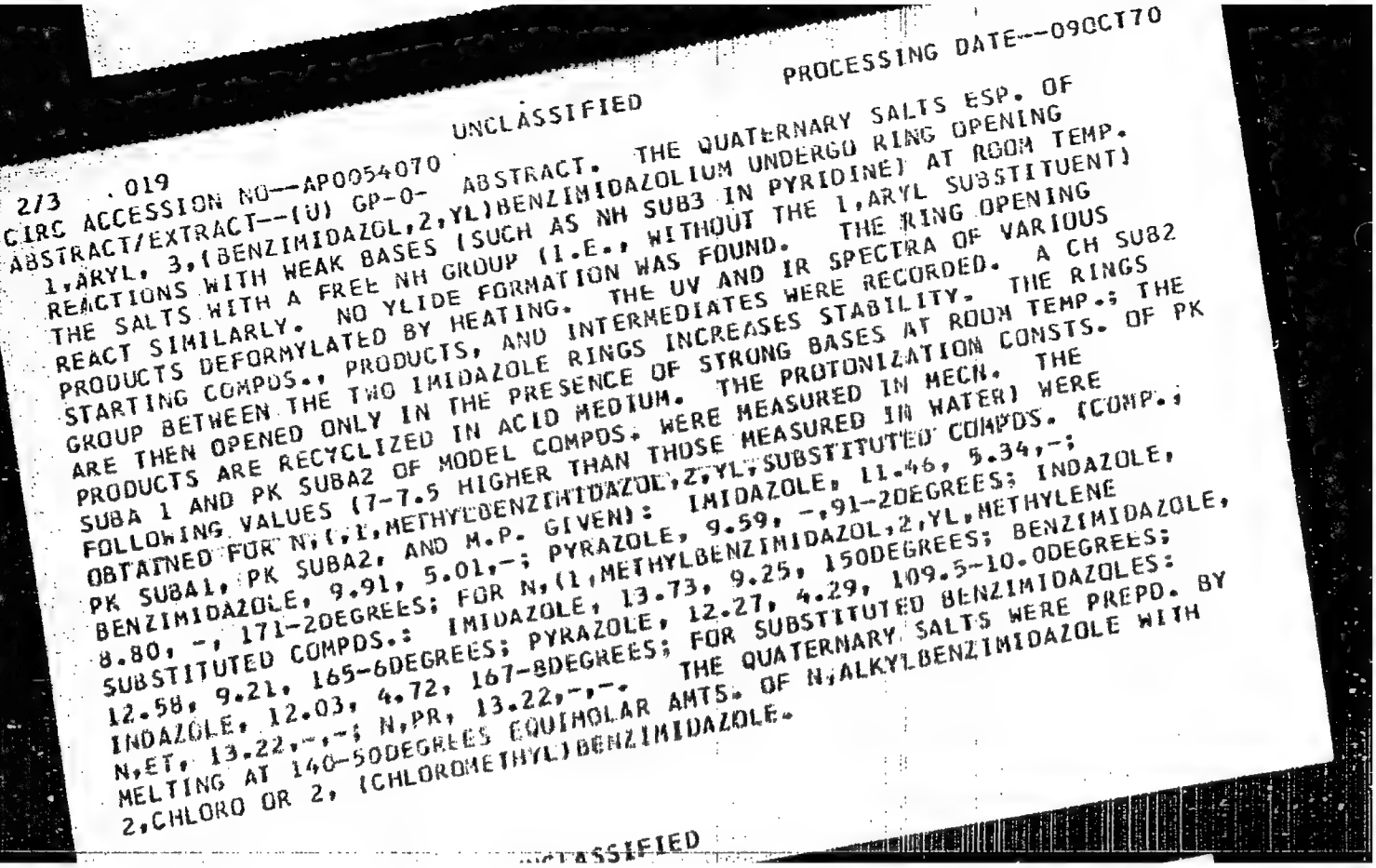

2/3 019 UNCLASSIFIED PROCESSING DATE--09OCT70
CIRC ACCESSION NO--AP0054070
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE QUATERNARY SALTS ESP. OF 1,ARYL, 3,(BENZIMIDAZOL,2,YL)BENZIMIDAZOLIUM UNDERGO RING OPENING REACTIONS WITH WEAK BASES (SUCH AS NH SUB3 IN PYRIDINE) AT ROOM TEMP. THE SALTS WITH A FREE NH GROUP (I.E., WITHOUT THE 1,ARYL SUBSTITUENT) REACT SIMILARLY. NO YLIDE FORMATION WAS FOUND. THE RING OPENING PRODUCTS DEFORMYLATED BY HEATING. THE UV AND IR SPECTRA OF VARIOUS STARTING COMPDS., PRODUCTS, AND INTERMEDIATES WERE RECORDED. A CH SU82 GROUP BETWEEN THE TWO IMIDAZOLE RINGS INCREASES STABILITY. THE RINGS ARE THEN OPENED ONLY IN THE PRESENCE OF STRONG BASES AT ROOM TEMP.; THE PRODUCTS ARE RECYCLIZED IN ACID MEDIUM. THE PROTONIZATION CONSTS. OF PK SUBA 1 AND PK SUBA2 OF MODEL COMPDS. WERE MEASURED IN MECH. THE FOLLOWING VALUES (7-7.5 HIGHER THAN THOSE MEASURED IN WATER) WERE OBTAINED FOR N,(,1,METHYLBENZIMIDAZOL,2,YL,SUBSTITUTED COMPDS. (COMP., PK SUBA1, PK SUBA2, AND M.P. GIVEN): IMIDAZOLE, 11.46, 5.34,-; BENZIMIDAZOLE, 9.91, 5.01,-; PYRAZOLE, 9.59, -,91-2DEGREES; INDAZOLE, 8.80, -, 171-2DEGREES; FOR N,(1,METHYLBENZIMIDAZOL,2,YL,METHYLENE SUBSTITUTED COMPDS.: IMIDAZOLE, 13.73, 9.25, 150DEGREES; BENZIMIDAZOLE, 12.58, 9.21, 165-6DEGREES; PYRAZOLE, 12.27, 4.29, 109.5-10.0DEGREES; INDAZOLE, 12.03, 4.72, 167-8DEGREES; FOR SUBSTITUTED BENZIMIDAZOLES: N,ET, 13.22,-,-; N,PR, 13.22,-,-. THE QUATERNARY SALTS WERE PREPD. BY MELTING AT 140-50DEGREES EQUIMOLAR AMTS. OF N,ALKYLBENZIMIDAZOLE WITH 2,CHLORO OR 2, (CHLOROMETHYL)BENZIMIDAZOLE.

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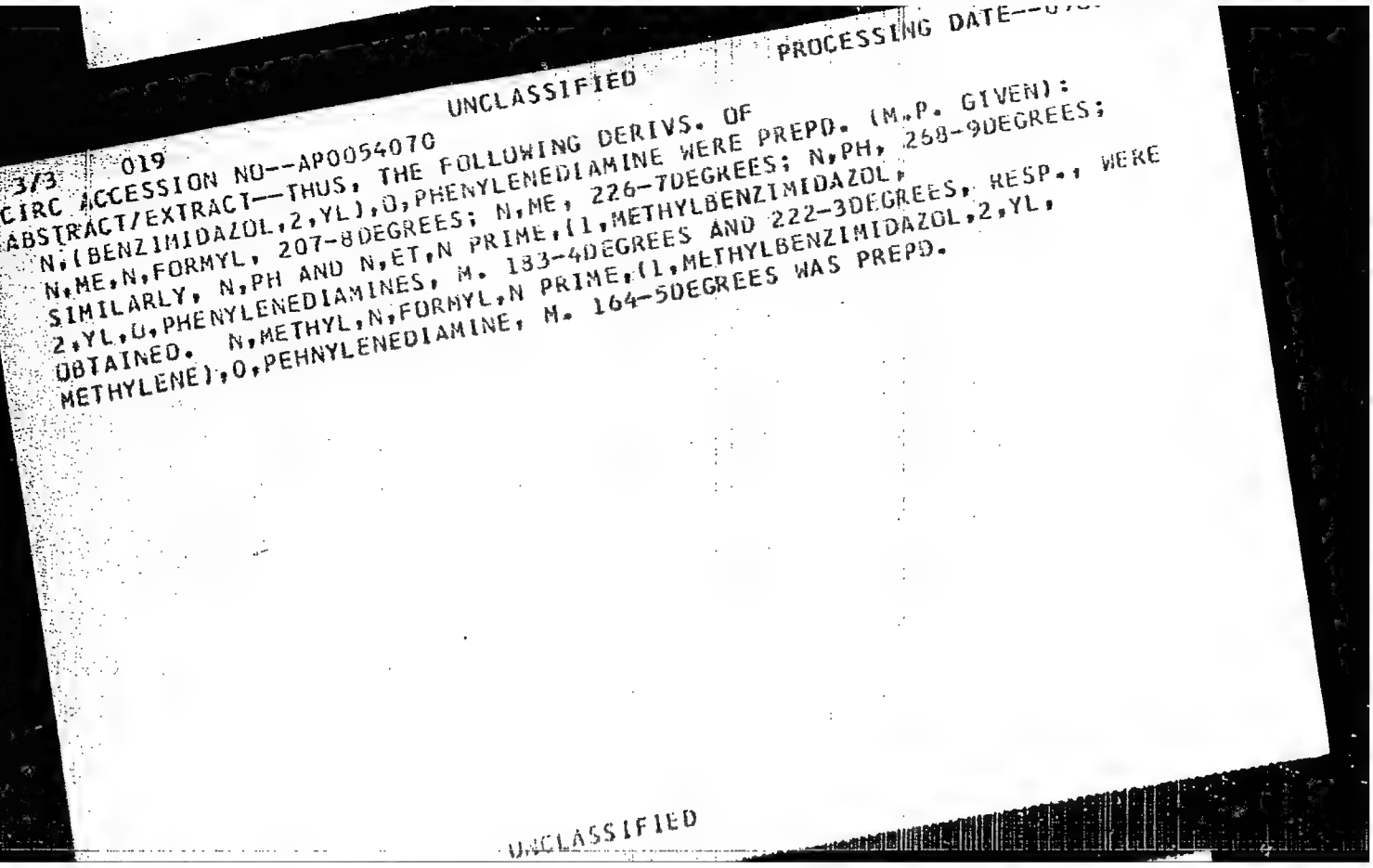

UNCLASSIFIED PROCESSING DATE--

3/3 019

CIRC ACCESSION NO--AP0054070

ABSTRACT/EXTRACT--THUS, THE FOLLOWING DERIVS. OF N,(BENZIMIDAZOL,2,YL),O,PHENYLENEDIAMINE WERE PREPD. (M.P. GIVEN): N,ME,N,FORMYL, 207-8DEGREES; N,ME, 226-7DEGREES; N,PH, 268-9DEGREES; SIMILARLY, N,PH AND N,ET,N PRIME,(1,METHYLBENZIMIDAZOL, 2,YL,O,PHENYLENEDIAMINES, M. 183-4DEGREES AND 222-3DEGREES, RESP., WERE OBTAINED. N,METHYL,N,FORMYL,N PRIME,(1,METHYLBENZIMIDAZOL,2,YL, METHYLENE),O,PEHNYLENEDIAMINE, M. 164-5DEGREES WAS PREPD.

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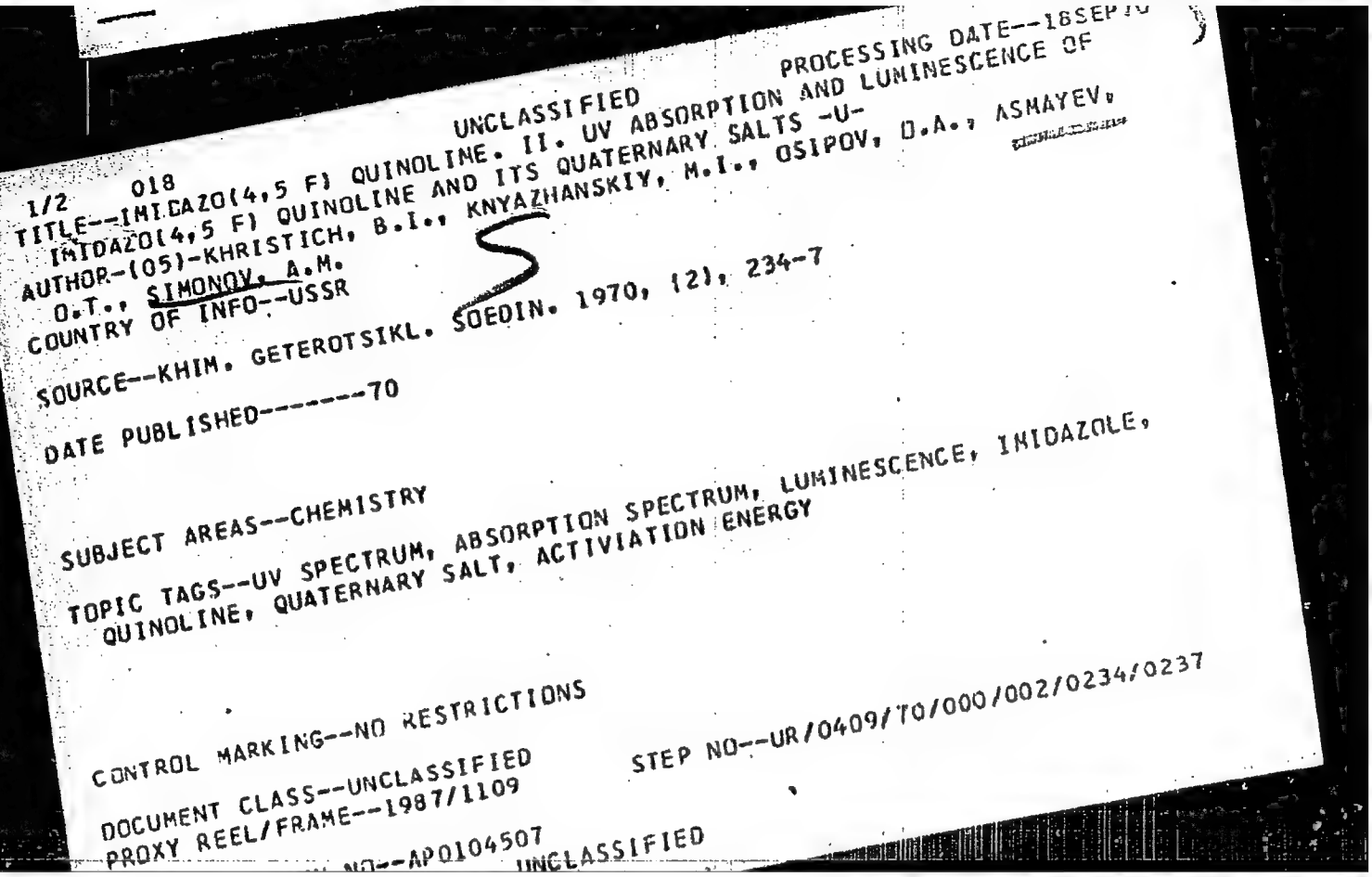

UNCLASSIFIED PROCESSING DATE--16SEP70

1/2 018

TITLE--IMIDAZO(4,5 F) QUINOLINE. II. UV ABSORPTION AND LUMINESCENCE OF IMIDAZO(4,5 F) QUINOLINE AND ITS QUATERNARY SALTS -U-

AUTHOR-(05)-KHRISTICH, B.I., KNYAZHANSKIY, M.I., OSIPOV, O.A., ASMAYEV, O.T., SIMONOV, A.M.

COUNTRY OF INFO--USSR

SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970, (2), 234-7

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--UV SPECTRUM, ABSORPTION SPECTRUM, LUMINESCENCE, IMIDAZOLE, QUINOLINE, QUATERNARY SALT, ACTIVIATION ENERGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED STEP NO--UR/0409/70/000/002/0234/0237

PROXY REEL/FRAME--1987/1109

NO--AP0104507 UNCLASSIFIED

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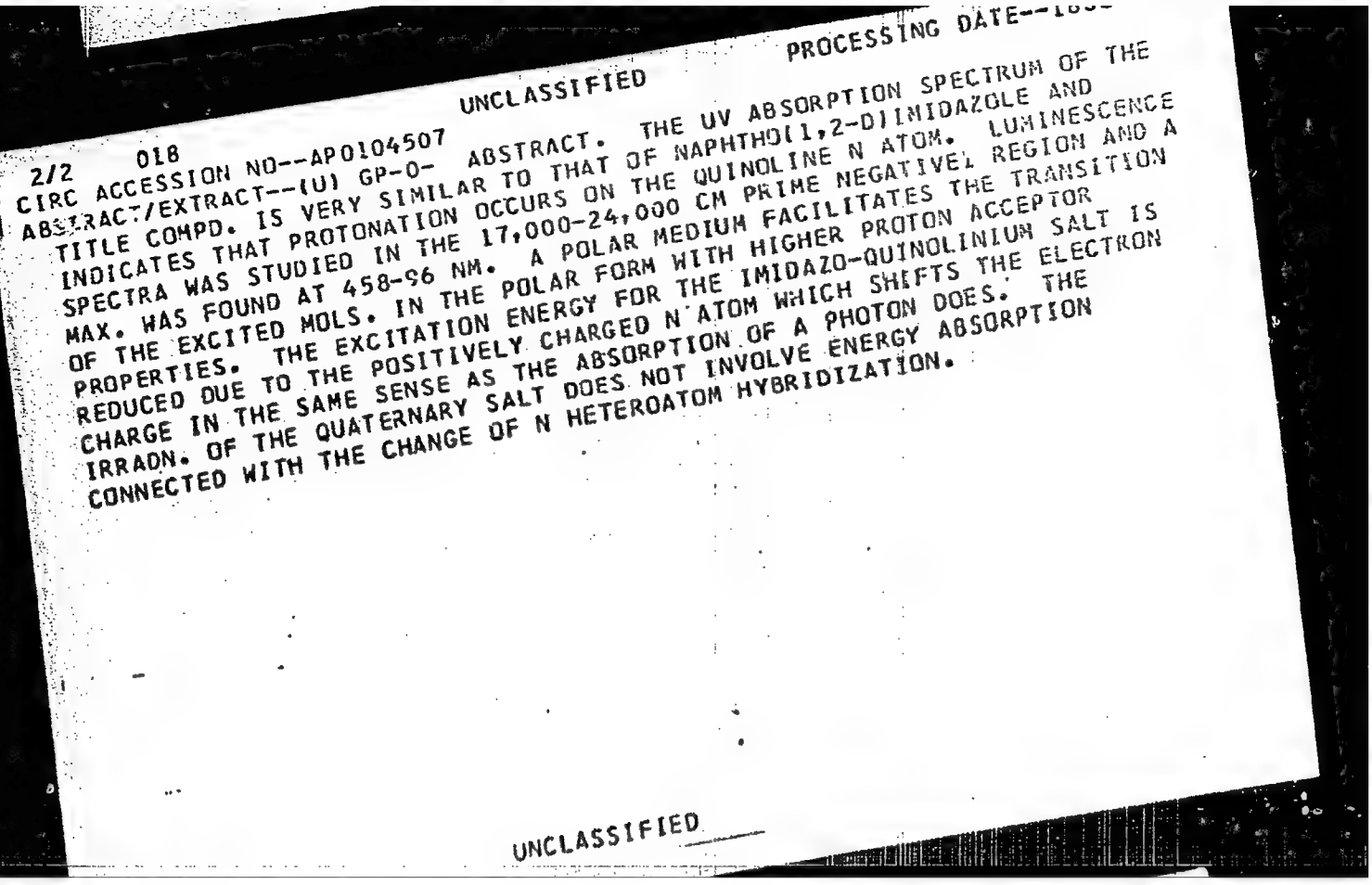

UNCLASSIFIED PROCESSING DATE--

2/2 018

CIRC ACCESSION NO--AP0104507

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE UV ABSORPTION SPECTRUM OF THE TITLE COMPD. IS VERY SIMILAR TO THAT OF NAPHTHO(1,2-D)IMIDAZOLE AND INDICATES THAT PROTONATION OCCURS ON THE QUINOLINE N ATOM. LUMINESCENCE SPECTRA WAS STUDIED IN THE 17,000-24,000 CM PRIME NEGATIVE REGION AND A MAX. WAS FOUND AT 458-96 NM. A POLAR MEDIUM FACILITATES THE TRANSITION OF THE EXCITED MOLS. IN THE POLAR FORM WITH HIGHER PROTON ACCEPTOR PROPERTIES. THE EXCITATION ENERGY FOR THE IMIDAZO-QUINOLINIUM SALT IS REDUCED DUE TO THE POSITIVELY CHARGED N ATOM WHICH SHIFTS THE ELECTRON CHARGE IN THE SAME SENSE AS THE ABSORPTION OF A PHOTON DOES. THE IRRADN. OF THE QUATERNARY SALT DOES NOT INVOLVE ENERGY ABSORPTION CONNECTED WITH THE CHANGE OF N HETEROATOM HYBRIDIZATION.

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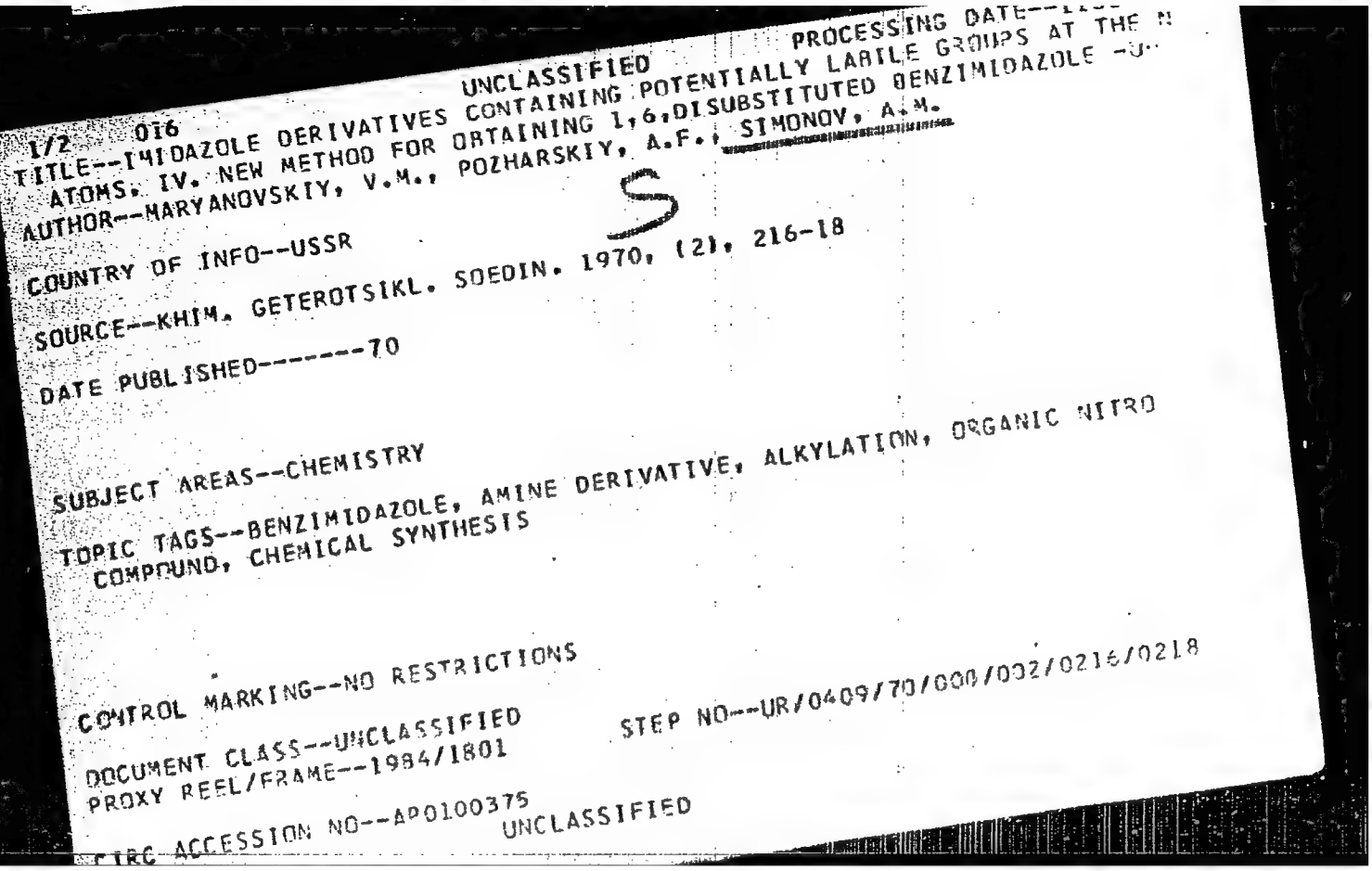

UNCLASSIFIED

1/2 016 PROCESSING DATE--

TITLE--IMIDAZOLE DERIVATIVES CONTAINING POTENTIALLY LABILE GROUPS AT THE N ATOMS. IV. NEW METHOD FOR OBTAINING 1,6-DISUBSTITUTED BENZIMIDAZOLE -U-

AUTHOR--MARYANOVSKIY, V.M., POZHARSKIY, A.F., SIMONOV, A.M.

COUNTRY OF INFO--USSR

SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970, (2), 216-18

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--BENZIMIDAZOLE, AMINE DERIVATIVE, ALKYLATION, ORGANIC NITRO COMPOUND, CHEMICAL SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED STEP NO--UR/0409/70/000/002/0216/0218

PROXY REEL/FRAME--1984/1801

CIRC ACCESSION NO--AP0100375 UNCLASSIFIED

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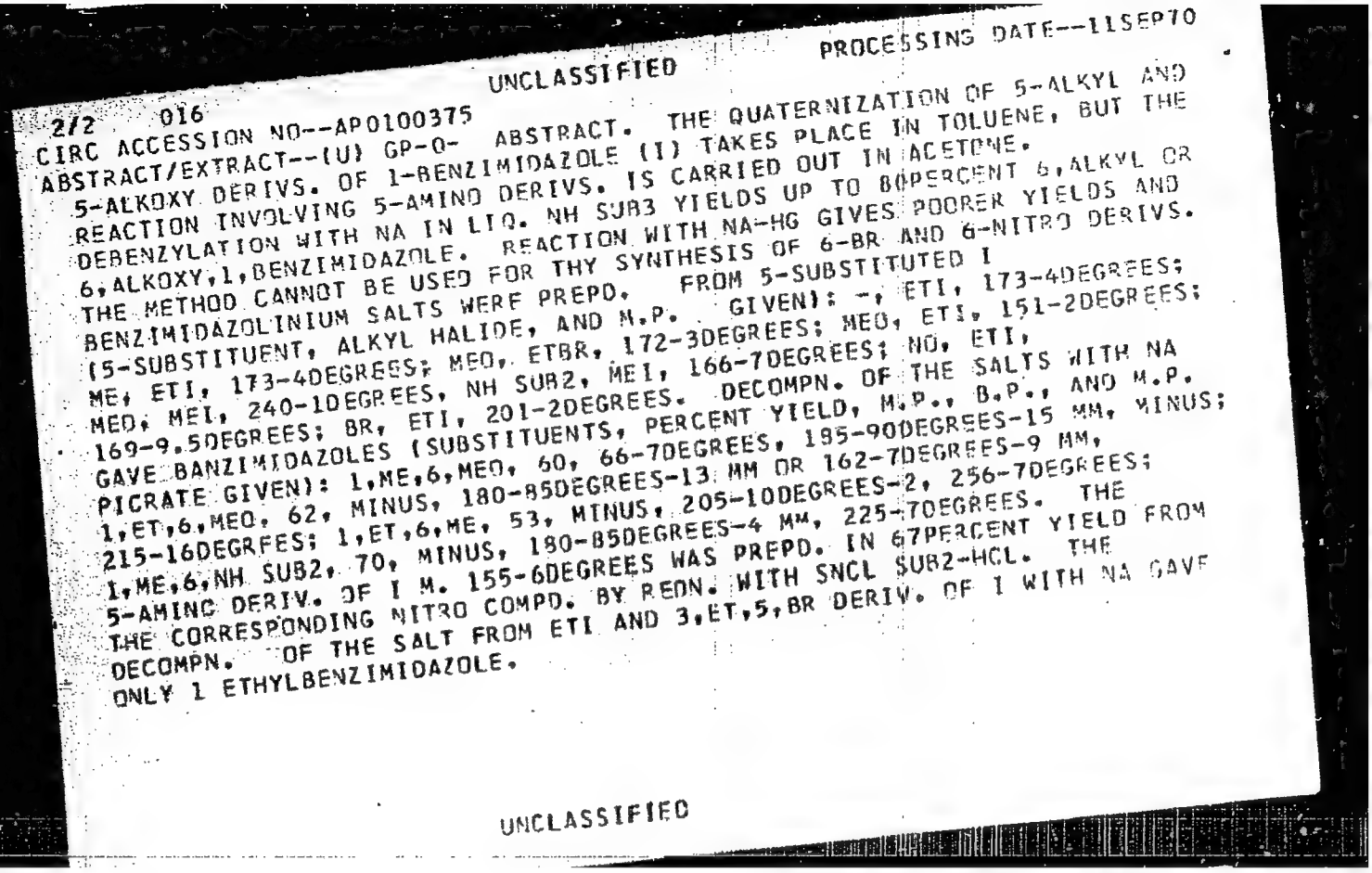

2/2 016 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0100375

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE QUATERNIZATION OF 5-ALKYL AND 5-ALKOXY DERIVS. OF 1-BENZIMIDAZOLE (I) TAKES PLACE IN TOLUENE, BUT THE REACTION INVOLVING 5-AMINO DERIVS. IS CARRIED OUT IN ACETONE. DEBENZYLATION WITH NA IN LIQ. NH SUB3 YIELDS UP TO 80PERCENT 6,ALKYL OR 6,ALKOXY,1,BENZIMIDAZOLE. REACTION WITH NA-HG GIVES POORER YIELDS AND THE METHOD CANNOT BE USED FOR THY SYNTHESIS OF 6-BR AND 6-NITRO DERIVS. BENZIMIDAZOLINIUM SALTS WERE PREPD. FROM 5-SUBSTITUTED I (5-SUBSTITUENT, ALKYL HALIDE, AND M.P. GIVEN): -, ETI, 173-4DEGREES; ME, ETI, 173-4DEGREES; MEO, ETBR, 172-3DEGREES; MEO, ETI, 151-2DEGREES; MEO, MEI, 240-1DEGREES, NH SUB2, MEI, 166-7DEGREES; NO, ETI, 169-9.5DEGREES; BR, ETI, 201-2DEGREES. DECOMPN. OF THE SALTS WITH NA GAVE BANZIMIDAZOLES (SUBSTITUENTS, PERCENT YIELD, M.P., B.P., AND M.P. PICRATE GIVEN): 1,ME,6,MEO, 60, 66-7DEGREES, 195-90DEGREES-15 MM, MINUS; 1,ET,6,MEO, 62, MINUS, 180-85DEGREES-13 MM OR 162-7DEGREES-9 MM, 215-16DEGREES; 1,ET,6,ME, 53, MINUS, 205-10DEGREES-2, 256-7DEGREES; 1,ME,6,NH SUB2, 70, MINUS, 180-85DEGREES-4 MM, 225-7DEGREES. THE 5-AMINO DERIV. OF I M. 155-6DEGREES WAS PREPD. IN 67PERCENT YIELD FROM THE CORRESPONDING NITRO COMPD. BY REDN. WITH SNCL SUB2-HCL. THE DECOMPN. OF THE SALT FROM ETI AND 3,ET,5,BR DERIV. OF I WITH NA GAVE ONLY 1 ETHYLBENZIMIDAZOLE.

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UNCLASSIFIED PROCESSING DATE--11SEP70

1/2 019

TITLE--NATURE OF THE INTERACTION OF PHENYL AND IMIDAZOLE RINGS IN N,ARYLIMIDAZOLES. IV. DERIVATIVES OF 1,PHENYLIMIDAZOLE WITH SUBSTITUENTS

AUTHOR--POZHARSKIY, A.F., SITKINA, L.M., SIMONOV, A.M., CHEGOLYA, T.N.

COUNTRY OF INFO--USSR

SOURCE--KHIM. GETEROTSIKL. SOEDIN 1970, (2), 209-13

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--BENZENE DERIVATIVE, IMIDAZOLE, ELECTRON ACCEPTOR, ELECTRON DONOR, DIPOLE MOMENT, IONIZATION CONSTANT, UV SPECTRUM, MOLECULAR INTERACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

STEP NO--UR/0409/70/000/002/0209/0213

PROXY REEL/FRAME--1984/1803

CIRC ACCESSION NO--AP0100377

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

UNCLASSIFIED PROCESSING DATE--11SEP70

2/2 019
CIRC ACCESSION NO--AP0100377
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE UV ABSORPTION SPECTRA OF SUBSTITUTED 1,PHENYLIMIDAZOLES WERE RECORDED. THE INTRODUCTION OF ELECTRON ACCEPTOR GROUPS INTO THE BENZENE RING EXERTS A BATHOCHROMIC SHIFT WHILE THE ELECTRON DONOR GROUPS HAVE LITTLE EFFECT. THE DIPOLE MOMENTS MU (IN D), IONIZATION CONSTS. (PK SUBA), AND THE RATE CONST. K OF THE REACTION WITH ETI (10 PRIME NEGATIVE6 L. MOLE PRIME NEGATVEI SEC PRIME NEGATIVE1) FOR I WERE (R MU, PK SUBA, AND K GIVEN): H, 3.50, 5.10, 15.7; P-ME, 3.90, 5.24, 19.0; M-ME, 3.73, 5.24, 16.9; OMICRON-ME, 3.79,-, -; P-BR, 2.20, 4.91, 11.0; P-OH, 5.48, 5.35, 22.6; P-AC, 2.39, 4.54, 10.8; P-O SUB2 N, 1.55, 3.96, U.8; M-O SUB2 N, 3.63, -, -; P-MEO, -, 5.23, 19.6. THE IMIDAZOLE GROUP IN I BEHAVES AS AN ELECTRON DONOR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

1/2 010 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--REACTION OF 2,AMINOMETHYLBENZIMIDAZOLE WITH NITROUS ACID -U-

AUTHOR--CHUB, N.K., TSUPAK, YE.B., SIMONOV, A.M.

COUNTRY OF INFO--USSR

SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970, (1), 127

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL SYNTHESIS, CHLORINATED ORGANIC COMPOUND, BROMINATED ORGANIC COMPOUND, BENZENE DERIVATIVE, ORGANIC AZOLE COMPOUND, AMINE DERIVATIVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/1782 STEP NO--UR/0409/70/000/001/0127/0127

CIRC ACCESSION NO--AP0100362

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

2/2 010 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0100362

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REACTION OF I (R PRIME1 EQUALS CH SUB2 NH SUB2, R PRIME2 EQUALS H) WITH 1 MOLE HNO SUB2 IN HCL OR HBR SOLN. (3 MOLES) GAVE I (R PRIME1 EQUALS CH SUB2 CL OR CH SUB2 BR, R PRIME2 EQUALS H) IN 81 AND 90PERCENT YIELDS, RESP. WITH EXCESS HNO SUB2 (2 MOLES) THERE WERE FORMED I (R PRIME1, R PRIME2, PERCENT YIELD, M.P., AND CRYSTN. SOLVENT GIVEN): CH SUB2 CL, NO, 17, 173DEGREES, MEOH; CH SUB2 OH, H, 35, 171-2DEGREES, H SUB2 O; HON:CNO SUB2, H, 39, 108DEGREES (DECOMPN.), BAR.

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USSR

YANAYT, Yu. A., ABAKUMOV, G. A., KROMSKIY, G. I., SIMONOV, A. P., FADEYEV, V. V., and KHOKHLOV, R. V., Moscow State University imeni M. V. Lomonosov and The Physico-Chemical Institute imeni L. Ya. Karpov

"Generation in the Ultraviolet Band With Frequency Tuning in a Paraterphenyl Solution Excited by a Flash Bulb"

Moscow, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 13, No 11, 5 Jun 71, pp 616-619

Abstract: This article discusses generation with fine tuning in the wavelength of 330-350 nm in a paraterphenyl solution excited by a flash bulb. One of the real problems in quantum electronics is the design of a frequency-tunable laser in the ultraviolet band of the spectrum. The authors show the broad possibilities here of using organic compounds as the active media especially paraterphenyl, which is found to be the best compound for producing tunable lasers in the ultraviolet band pumped by flash bulbs. The experimental procedures are discussed and the results are given in the form of an oscillogram and a table, which gives the threshold values and the limits of frequency tuning. The low values of the threshold energies for exciting the solutions shown in this table indicate that this pumping system is also effective for exciting a large number of other organic compounds. 1 figure, 1 table, bibliography of 3 titles.
1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

1/2 049 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--MEASUREMENT OF TRIPLET TRIPLET ABSORPTION SPECTRA OF MOLECULES OF ORGANIC COMPOUNDS IN LIQUID SOLUTIONS BY USING A LASER -U-

AUTHOR-(04)-TSURIKOV, YU.L., ABAKUMOV, G.A., TRUSHANOV, A.A., SIMONOV, A.P.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. SPEKTROSK. 1970, 12(2), 336-8

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--ABSORPTION SPECTRUM, NAPHTHALENE, RUBY LASER, AROMATIC KETONE, BENZENE, PULSE EXCITATION, LASER RADIATION, SECOND HARMONIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1241 STEP NO--UR/0368/70/012/002/0336/0338

CIRC ACCESSION NO--AP0116703

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

2/2 049 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0116703

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SPECTRA OF TRIPLET TRIPLET (T-T) ABSORPTION OF PH SUB2 CO AND NAPHTHALENE IN BENZENE SOLN. WERE MEASURED AT ROOM TEMP. BY USING A RUBY LASER 2ND HARMONICS RADIATION (LAMBDA EQUALS 347 NM; POWER 0.3-0.5 MW, AND PULSE DURATION SIMILAR TO 30 NSEC) AS THE EXCITATION SOURCE. THE 2ND HARMONICS WAS OBTAINED WITH A KH SUB2 PO SUB4 SINGLE CRYSTAL (25 MM LONG). SOLNS. OF FLUORESCEIN IN HOAC WATER MIXT. AND OF PHENYLACRIDONE IN ETOH WERE USED AS SOURCES OF VISIBLE REGION RADIATION. THE POSITIONS OF MAX. IN PH SUB2 CO AND NAPHTHALENE AT 350 AND 420 NM, RESP., IN THE T-T SPECTRUM, ARE IN GOOD AGREEMENT WITH LITERATURE DATA. THE ADVANTAGES OF THE USE OF LASER RADIATION FOR THE EXCITATION OF ORG. MOLS. IN SOLNS. ARE DISCUSSED.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

1/2 040 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--REACTION OF TRITIUM RECOIL ATOMS WITH SOME ALANINE DERIVATIVES -U-

AUTHOR--SIMONOV, E.F.

COUNTRY OF INFO--USSR

SOURCE--KHIM. VYS. ENERG. 1970, 4(2) 171

DATE PUBLISHED-------70

SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ALANINE, TRITIUM, COPPER COMPLEX, RADIATION EFFECT, PAPER CHROMATOGRAPHY, GAS CHROMATOGRAPHY, AMINO ACID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0194 STEP NO--UR/0456/70/004/002/0171/0171

CIRC ACCESSION NO--AP0106850

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

2/2 040 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0106850

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT WAS STUDIED OF STERIC FACTORS, AND THE ABILITY OF PARENT COMPDS. TO SCATTER THE EXCESS ENERGY, ON THE PRIMARY INTERACTIONS OF T RECOIL ATOMS WITH AMINO ACIDS IN THE CRYST. STATE. CU COMPLEXES AND PHTHALOYL DERIVATIVES OF ALPHA AND BETA,ALANINE WERE MIXED WITH LI SUB2 CO SUB3 AND IRRADIATED FOR 1 HR BY A FLUX OF 1.2 TIMES 10 PRIME13 N-CM PRIME2 SEC. THE IRRADIATED SAMPLES WERE ANALYZED BY GAS LIQ. AND PAPER CHROMATOG.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

SIMONOV, I. V., Moscow UDC 532.593

"Diffraction of a Strong Shockwave on a Weakly Expressed Wedge"

Zhurnal Prikladnoy Mekhaniki i Tekhnicheskoy Fiziki, No 6, 1971, pp 107-114.

ABSTRACT: The diffraction of a strong shockwave on a wedge is studied, assuming a slight difference in the properties of the material of the medium and the wedge. The angle of the wedge and the placement of the wedge in relationship to the leading edge of the wave are arbitrary. Under conditions of high pressures and temperatures developed at the leading edge of the strong shockwave ($P \sim 10^6$ atm), naturally, in many cases the theoretical calculations ignore the strength of the material and utilize comparatively simple medium models for description of the state of the matter, for example the model of an ideal fluid. Comparison of the results of this theoretical approach with the results of experiments indicate the boundaries of applicability of this model and indirectly indicate the degree of influence of factors not considered. The problem in hand is reduced to the problem of Hilbert. It is found that the condition of existence of a solution of the Hilbert problem in the class of functions with no null below second order at infinity is identical to the condition of stability of the shockwave in a homogeneous medium.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

UDC 621.385.623.4 (088.8)

ZUSMANOVSKIY, S. A., ZIMIN, S. P., SIMONOV, K. G.

"Two-Gap Resonator"

USSR Author's Certificate No 253854, filed 11 Mar 68, published 29 Jun 70 (from RZh-Elektronika i yeye primeneniye, No 2, Feb 71, Abstract No 2A172P)

Translation: A two-gap resonator for microwave devices is patented, with two interaction regions, bounded by each end of the drift tube and by the intervening wall with apertures, perpendicular to the direction of the electrons, and which differs in the fact that with the object of matching the velocity modulation of the electron stream with respect to its cross section and increasing the efficiency, the distance between the ends of the drift tube forming the overall interaction space is selected so as to exceed by not less than 1.5 times the diameter of the apertures for passage of the electron stream.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

UDC: 621.372.413

ZUSMANOVSKIY, S. A., ZIMIN, S. F., SIMONOV, K. G.

"Coefficient of Interaction and Electronic Conductivity of a Two-Gap Resonator"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektron. SVCh (Electronic Technology. Scientific and Technical Collection. SHF Electronics), 1970, vyp. 1, pp 55-57 (from RZh-Radiotekhnika, No 7, Jul 70, Abstract No 7B139)

Translation: Expressions for the coefficient of interaction and the components of electronic conductivity with regard to space charge forces are given for a two-gap resonator in the case of an arbitrary phase shift for the fields in the gaps. Two-gap resonators with both plane and gridless gaps are considered. The given relationships may be used to determine the geometric dimensions of the field of interaction of a two-gap resonator which give maximum interaction for any phase shift of the fields in the gaps. Bibliography of four titles. Resumé.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

1/2 014 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--PERICLASE SPINELLIDE MANUFACUTRED ARTICLES BASED ON MAGNESITE POWDER FROM CAUSTIC DUST -U-

AUTHOR-(03)-BUGAYEV, N.F., SIMONOV, K.V., VYUNNIKOVA, YE.I.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, OGNEUPORY, NO. 5, MAY 70, PP 12-13

DATE PUBLISHED----MAY70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--REFRACTORY PRODUCT, ROASTING FURNACE, SPINEL, MAGNESIUM OXIDE, THERMAL STABILITY/(U)COST 10888 64 REFRACTORY QUALITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/0707 STEP NO--UR/0131/70/000/005/0012/0013

CIRC ACCESSION NO--AP0134442

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

2/2 014 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0134442

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RESULTS ARE GIVEN OF A STUDY OF THE CHARACTERISTICS OF MANUFACTURED OBJECTS MADE FROM POWDER OBTAINED BY ROASTING CAUSTIC MAGNESITE IN A ROTATING OVEN WITH SINTERING ADDITIVES. THE OBJECTS WERE TESTED WHILE IN ACTUAL USE. A TABLE GIVES THE CHEMICAL COMPOSITION OF THE POWDERS. ANOTHER TABLE GIVES THE CHARACTERISTICS OF THE MANUFACTURED ARTICLES. THE OBJECTS TESTED SATISFIED ALL REQUIREMENTS, EXCEPT THAT OF THERMAL STABILITY, OF GOST, ALL UNION STATE STANDARD, 10888-64. FACILITY: MAGNEZIT PLANT.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

Acc. Nr: AP0046634 Abstracting Service: CHEMICAL ABST. 4-70 Ref. Code: 4R 0131

82444w Large-scale magnesite and chromium magnesite refractories for open-hearth furnaces. Cherepov, P. V.; Simonov, K. V.; Koren'kov, V. N.; Bezryadnov, A. A. (USSR). *Ogneupory* 1970, 35(1), 14–15 (Russ). The attempt was made to substitute hitherto used refractory bricks 230 × 115 × 65 mm for bricks of size 300 × 150 × 65 mm. The performance of the press is increased by 4–5 ton/day. Also, the efficiency of bricklayers building blast furnaces with larger bricks rises 10–15%. In addn., with larger bricks the no. of crannies in brick-work is diminished in the horizontal direction which improves the servicability of the brick-work. J. Jindra

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

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BUGAYEV, N. F., SIMONOV, K. V., V'YUNNIKOVA, YE. I. ("Magnezit" Plant), NAZAROV, K. S. (Magnitogorsk Metallurgical Combine)

"Periclase Spinellide Manufactured Articles Based on Magnesite Powder From Caustic Dust"

Moscow, Ogneupory, No 5, May 70, pp 12-13

Abstract: The results are given of a study of the characteristics of manufactured objects made from powder obtained by roasting caustic magnesite in a rotating oven with sintering additives. The objects were tested while in actual use. A table gives the chemical composition of the powders. Another table gives the characteristics of the manufactured articles. The objects tested satisfied all requirements, except that of thermal stability, of GOST (All-Union State Standard) 10888-64

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Refractory Materials

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USSR

BUGAYEV, N. F., SIMONOV, K. V., CHERNYAVSKAYA, V. P., KATSAY, YE. V., VORONIN, T. G.

"Refractories of Caustic Magnesite"

Moscow, Ogneupory, No 3, Mar 70, pp 2-3

Abstract: This article describes the experience in manufacture and service testing of magnesite refractories based on 0-4 mm fraction powder produced by roasting caustic magnesite without sintering additives. The experimental products were made using the technological process for the production of ordinary magnesite products and roasted at 1650°C. The properties of the roasted products are described. The deformation temperature under load is 80°C higher than that called for by the standards. Furnace tests showed that the experimental brick wears evenly during operation. The experimental refractories held up to usage as well as standard refractories.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

UDC 621.373.52-181.48

ZHITNIKOV, YE. I., SIMONOV, L. A., and MARTYNOVA, G. G.

"Generators Based on RC-Structures With Distributed and Lumped Parameters Made From Integrated Hybrid Circuits"

Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. tekhn. (Collected Scientific Works on Problems in Microelectronics. Moscow Institute of Electronics Technology), 1972, vyp.10, pp 194-200 (from RZh-Radiotekhnika, No 11, Nov 72, Abstract No 11 D266)

Translation: The authors describe the principal circuits and present the results of the experimental studies of RC-generators based on integrated hybrid microcircuits. The studies were carried out within a broad range of frequencies from 3 cps to 10 Mc. Data are also given on the stability of the frequency and amplitude of RC-generators and on the control of the frequency of RC-generators with the aid of varicaps of p-n-junctions. Resume.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

UDC: 548.5 (2)

TSEYTLIN, M. N., PLAKHOV, G. F., LOBACHEV, A. N., POPOLITOV, V. I., SIMONOV, M. A., and BELOV, N. V.

"Investigating Crystallization in the Hydrothermal System of GeO_2-Sb_2O_3-KF-H_2O"

Moscow, Kristallografiya, vol 18, No 4, 1973, pp 836-839

Abstract: An investigation is conducted into the crystallization conditions in the GeO_2-Sb_2O_3-KF-H_2O system by the hydrothermal method. The purpose of this investigation is two-fold: first, to fill in the gaps of knowledge concerning the interaction chemistry of germanium dioxide and antimony trioxide in the presence of a solution at high temperatures and pressures; second, to obtain all possible single crystals with no analogs in nature because of their potential value as objects of study with regard to structure and physical characteristics. The experiments were conducted with a charge consisting of GeO_2 and Sb_2O_3 copper lined autoclaves with periodic action. The results of the examination of the crystallization in the system are given individually for each temperature jump in the range of 400-550° C, the jumps being made in 20-45° intervals. Photographs of the crystals are shown, 1/2

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

UDC: 548.5

TSEYTLIN, M. N., et al, Kristallografiya, vol 18, No 4, 1973, pp 836-839

and a table of interplanar distances for $Sb_2Ge_2O_7$ crystals is given.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

UDC: 548.736.4

BELOKONEVA, Ye. L., IVANOV, Yu. A., SIMONOV, M. A., BELOV, N. V., Moscow State University imeni M. V. Lomonosov

"Crystal Structure of Cadmium Orthogermanate $Cd_2[GeO_4]$"

Moscow, Kristallografiya, Vol 17, No 1, Jan/Feb 72, pp 217-219

Abstract: The authors determine the crystal structure of synthetic germanate of cadmium. From the lattice parameters and interplane distances, it is established that the compound is an analog of γ-Ca_2SiO_4. The assumed formula of Cd_2GeO_4 was later confirmed by chemical analysis. The interatomic distances for cadmium orthogermanate are calculated and the coordinates of the basis atoms are compared for calcium orthosilicate and cadmium orthogermanate. The results are tabulated. It is found that an olivine-like band is repeated in the cadmium orthogermanate crystal structure. Each oxygen atom is simultaneously the vertex of 3 Cd-octahedra and one Ge-tetrahedron, and 3 of the 6 edges of the tetrahedron are shared by Cd-octahedra. One figure, four tables, bibliography of two titles.
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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

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UDC 548.736.6

CHIN', KHAN, SIMONOV, M. A., BELOV, N. V.

"Crystal Lattices of Willemite $Zn_2[SiO_4]$ and Its Germanium Analog $Zn_2[GeO_4]$

Moscow, Kristallografiya, Vol 15, No 3, 1970, pp 457-460

Abstract: This article contains a discussion of results from tests run on crystals of synthetic willemite and its Ge-analog $Zn_2[GeO_4]$. The parameters of the crystals are tabulated, and the various analyses run to determine them are described. The parameters of the elementary cells were as follows: Si-willemite $a_{hex} = 13.93$, $c_{hex} = 9.31$Å, $a_{rh} = 8.63$Å, $\alpha = 107.52$, Ge-willemite $a_{hex} = 14.27$, $c_{hex} = 9.56$Å, $a_{rh} = 8.84$Å, $\alpha = 107°42'$. Fedorov group $R\bar{3}$. The lattices were resolved by the "heavy atom" with subsequent more precise definition of the coordinates of the atoms with respect to three-dimensional sets of reflections by the least squares method to $R_{hk1} = 14.3$ percent with 250 independent nonzero reflections hk0-hk6 for willemite and $R_{hk1} = 13.3$ percent with 226 reflections hk0, hk3, hk6, hk9 for its Ge-analog. The metachains $[Zn_{1.0}O_{2}]$ twist around the axes 3_1 (3_2), and they are incrusted with Si(Ge)-orthotetrahedrons.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

CHIN', KHAN, et al, Kristallografiya, Vol 15, No 3, 1970, pp 457-460

Each O atom is in the center of an almost equilateral triangle Zn-Zn-Si(Ge), and each cation is in the tetrahedral enclosure of O atoms. The interatomic distances calculated by the terminal coordinates are as follows: Si-O = 1.58-1.68; Ge-O = 1.74-1.78; Zn-O = 1.8?-2.02 Å. They agree with those already encountered. Willemite and its Ge-analog fill up the isostructural series: $Li_2[BeP_4]$-$Li_2[WO_4]$-$Li_2[MoO_4]$-$Be_2[SiO_4]$-$Zn_2[SiO_4]$ $(Zn, Mn)_2[SiO_4]$-$Zn_2[GeO_4]$. If the crystal chemical role of Si and Zn is equalized, the lattice can be considered skeletal, made of tetrahedrons with the formula $(Zn, Si)_3O_4$. If it is classified with respect to the silicon oxide radical, then $Zn_2[SiO_4]$, jointly with phenakite $Be_2[SiO_4]$, form a special group of hexagonal orthosilicates which differ greatly from the rhombic orthosilicates of the olivine group.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

UDC 621.762.002.5(088.8)

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DRUSHININ, L. K., LIEPINA, YE. D., KUVSHINOV, P. S., SINONOV, L. P., SAFRONOV, B. V., PERFILOV, L. S., and TOKAREVA, L. I.

"Apparatus for Making Powders and Granules by Centrifugal Pulverization of Melt"

Ussr Authors' Certificate No 272501, Cl. 31 b^3, 9/00; 49 1, 3, [B 22 f 9/00, B 05 b 3/12], filed 12 Sep 68, published 2 Sep 70 (from RZh-Metallurgiya, No 3, Mar 71, Abstract No 3G470P by G. Derkacheva)

Translation: An apparatus is suggested for making powders and granules by centrifugal pulverization of a melt. The apparatus consists of a rotating ring with a hole in the bottom for delivery of the material to be pulverized, a local heat source situated above this material, and a cooler which is unique in that, in order to increase powder and granule quality, it is rigidly fastened to the outside of the ring.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

1/2 014 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--REMOVAL OF OIL FROM WASTE WATERS BY A PRESSURE FREE FLOTATION METHOD -U-

AUTHOR-(03)-ROZHNYATOVSKIY, I.I., SIMONOV, N.F., STEPANOV, YU.V.

COUNTRY OF INFO--USSR

SOURCE--KOKS KHIM 1970, (2) 35-9

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--CHEMICAL SEPARATION, FLOTATION, COKE, PETROLEUM PRODUCT, WATER PURIFICATION EQUIPMENT, INDUSTRIAL WATER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1991/0112 STEP NO--UR/0068/70/000/002/0035/0039

CIRC ACCESSION NO--AT0110084

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

2/2 014 UNCLASSIFIED PROCESSING DATE--020CT70

CIRC ACCESSION NO--AT0110084

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. OILS AND TARS CONTAINED IN EFFLUENTS OF COKE CHEM. PLANTS WERE REMOVED BY THE DISPERSED AIR FLOTATION IN OPEN CHAMBERS UNDER BOTH LAB. AND INDUSTRIAL PILOT PLANT CONDITIONS. IN THE LAB. THE DISPERSION OF AIR WAS GENERATED BY A SUBMERGED IMPELLER OF 45 MM DIAM. REVOLVING AT A PERIPHERAL SPEED OF 6 M-SEC. A 80-96PERCENT REMOVAL WAS ACHIEVED AT AN AIR TO LIQ. VOL. RATIO OF 30-40 AND A 13-18 MIN RETENTION. IN THE PILOT PLANT, FLOTATION FOLLOWS AFTER SEDIMENTATION BUT BEFORE ANY NH SUB3 CONTG. WASTE WATERS ARE ADDED, WHICH HAVE AN INHIBITING EFFECT. A 6 HR SEDIMENTATION RESULTS IN REMOVING ONLY 28PERCENT OF 190 PPM OF THE INITIAL OIL AND TAR CONTENTS. THE FLOTATION IS DONE IN 5 PARALLEL 1.5 TIMES 2.3 M CHAMBERS EACH OF WHICH IS EQUIPPED WITH AN IMPELLER OF 320-50 MM DIAM. PLACED AT 1.4 M BELOW THE WATER LEVEL, FED FROM THE OUTSIDE THROUGH 2 SUCTION PIPES AND DRIVEN BY A VERTICAL SHAFT 10 KW MOTOR AT VARIABLE SPEEDS OF 590, 730, AND 970 RPM. THE FLOTATION CHAMBERS ARE ADJOINED BY THE STEAM HEATED SLUDGE COMPARTMENTS RECEIVING SUPERNATANT MATTER SKIMMED BY A MECH. CONVEYOR. AN AV. 37-56PERCENT REDN. OF OIL AND TAR CONCN. TO RESIDUAL 74-58 PPM IS ACHIEVED AT THE OPTIMUM IMPELLER SPEED OF 730 RPM AND FLOW RATE OF 18-20 M PRIME3 HR CHAMBER WITH A CORRESPONDING AIR TO LIQ. RATIO OF 5.5-8.5. THE OPTIMUM RATE OF MECH. SKIMMING IS 1.2 M-MIN.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

UDC 621.362.2

LIDORENKO, N. S., LEBEDEV, V. F., SIMONOV, V. A.

"High-Reliability Thermoelectric Batteries"

Izvestiya Akademii Nauk SSSR, Energetika i Transport, No 6, 1971, pp 99-104.

ABSTRACT: A study is made of a thermoelectric packet type battery without insulation, in which the insulation units are replaced with connecting pipes having high electrical resistance. The effectiveness of this design was evaluated by comparing the integral current in the primary circuit of the battery with the parasitic current leaks through the connecting pipes. These currents were determined from the electrical field of the heat conductor, which was determined in turn from the LaPlace equation with boundary conditions found using supplementary electrical analogues. Practical recommendations are given for the production of similar batteries. A photograph and cross-sectional drawing of such a battery are presented. The leakage current in the thermal batteries was found to be 4-6% of the current passing through the elements. The distribution of potential in each junction indicated that there were no circulating currents in each half-element. The energy characterisitics of these batteries depend significantly on the thickness of the walls and pipe lenghts. As wall thickness is increased from 0.1 to 0.7-0.8 mm, current leaks increase in proportion to the ratio of cross-sectional areas.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

SIMONOV, PAVEL, Professor

"contacts Which Give Off Sparks (Certain General Problems of Physiology of the Brain, Psychology, and Ethics)"

Moscow, Novyy Mir, No 9, 1971, pp 188-205

Abstract: For many years the fields of physiology and ethics existed and worked far from one another, and the contradiction between the deterministic outlook of the former and the necessity of free choice in the latter was not a matter of concern. Contemporary problems have raised this question, however, especially the problems of education and upbringing. The usual view of Soviet Physiology was first expressed by Sechenov, who said that human behavior is 0.1% inborn traits and 99.9% taught "in the broad sense of the word." This has been generally accepted that homeostasis and self-preservation describe the state to which man is constantly striving, and they determine his behavior. But ethics and moral responsibility cannot tolerate the idea that behavior is determined, for then how can one be held to blame? The answer to this apparent contradiction would seem to lie in deeper study of the basic elements which make up human behavior, thought, emotion, and will. However, as suggested by the writing of Marx and Engels, human needs may provide the key to understanding behavior. In this respect the work of

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USSR

SIMONOV, P., Novyy Mir, No 9, 1971, pp 188--205

Fedor Dostoevski again shows its profundity, for he understood the role of needs and offered a useful classification of them (which, by the way, is close to Hegel's). They saw basically three kinds of needs: physical; group or social; and philosophical or moral (an answer to the question "Why?"). In the study of needs, a great deal of interesting material has been produced by observations of animals in their natural environments. Most significant are the numerous and clearly-expressed non-homeostatic behavior patterns that have been discovered. In addition, the role of the group (or society) and the individual's place in it appear very graphically in certain studies of animal behavior. Three specific responses noted in animals that appear very relevant to understanding elementary needs are (1) the investigative urge or attraction to novelty, (2) the desire to overcome obstacles just "because they are there," (this can be called the "freedom response"), and (3) reaction to signs of distress made by other members of the species, to the point of disregarding one's own safety or selfish interests, whic can be seen as the rudimentary form of altruism. One more thing that the study of animal behavior makes clear is that individual differences are very substantial, resulting from both position within the group and from inborn traits. There can be no question that the "tabula rasa" theory of newborn babies is incorrect; such traits as curiosity, imitation, caution, and others appear in

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USSR

SIMONOV, P., Novyy Mir, No 9, 1971, pp 188-205

differing degrees immediately. Fianlly, we arrive at a general conception of behavior as resulting from needs which are reflected in emotions and consciousness and directed, in some sense, by the will. A useful analogy in understanding the role of the will is that of the car battery. The will sets the organism in motion and then is recharged by it as action progresses. As I. P. Pavlov put it, in the area of brain physiology the mountain of the unknown remains incomparably larger than the kernels of knowledge we have attained. But the pursuit of knowledge goes on, because the ancient wisdom "Know thyself" has never sounded more urgently than in our day.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

1/2 020 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--CONDITIONED AVOIDANCE REACTIONS TO A PAIN STIMULATION OF ANOTHER ANIMAL -U-

AUTHOR-(02)-PREOBRAZHENSKAYA, L.A., SIMONOV, P.V.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL VYSSHEY NERVNOY DEYATEL'NOSTI, 1970, VOL 20, NR 2, PP 379-385

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PAIN, CONDITIONED REFLEX, RAT, DOG, MONKEY, ELECTRIC CURRENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/1702 STEP NO--UR/0247/70/020/002/0379/0385

CIRC ACCESSION NO--AP0106444

UNCLASSIFIED

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2/2 020 UNCLASSIFIED

CIRC ACCESSION NO--AP0106444 PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPERIMENTS ON TWELVE RATS AND THREE DOGS WERE AIMED AT ELABORATING AN AVOIDANCE RESPONSE TO A PAIN STIMULATION OF ANOTHER ANIMAL OF THE SAME SPECIES. THE REACTION OF THE RATS CONSISTED IN RUNNING TO A CERTAIN COMPARTMENT OF THE CAGE, AND OF THE DOGS, IN LIFTING THE LEFT FOREPAW WITH A LEVER ATTACHED TO IT TO DISCONNECT THE ELECTRIC CIRCUIT. THE AVOIDANCE REACTION COULD BE ELABORATED IN FOUR RATS AND ONE DOG WHICH HAD NEVER EXPERIENCED AN ELECTRIC STIMULATION. IN FIVE RATS THE REACTION APPEARED ONLY WHEN THEY HAD BEEN PREVIOUSLY USED AS "VICTIMS". THE RATS WHICH ELABORATED THE AVOIDANCE REACTION WITHOUT PRELIMINARILY EXPERIENCING THE ACTION OF THE CURRENT, ARE CHARACTERIZED BY A HIGH ACTIVITY IN "THE OPEN FIELD", VERY FEW DEFECATIONS AND URINATIONS AND THE ABSENCE OF ATTACKS IN RESPONSE TO ELECTRIC STIMULATION, I. E. BY A WEAK AGGRESSIVENESS. A CONCLUSION HAS BEEN DRAWN THAT SOME OF THE ANIMALS ACTIVELY TRY TO INTERRUPT OR PREVENT THE ACTION OF THE SIGNALS COMING FROM THE ANIMAL STIMULATED BY CURRENT (VOCAL REACTIONS, MOTOR EXCITATION, ETC.). SENSITIVITY TO SUCH SIGNALS DEPENDS ON THE ANIMAL'S INDIVIDUAL FEATURES TO A GREATER EXTENT THAN ON THE PHYLOGENETIC LEVEL (A RAT, A DOG, A MONKEY) AND APPARENTLY REPRESENTS AN INDEPENDENT LINE OF EVOLUTION.

FACILITY: INSTITUTE OF HIGHER NERVOUS ACTIVITY AND NEUROPHYSIOLOGY, USSR ACADEMY OF SCIENCES, MOSCOW.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

1/2 020 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--STATUS, PROSPECTS AND ORGANIZATION OF RESEARCH ON HIGHER NERVOUS ACTIVITY IN MAN -U-

AUTHOR--SIMONOV, P.V.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK AKADEMII MEDITSINSKIKH NAUK SSSR, VOL 25, NO 1, 1970 PAGES 16-22

DATE PUBLISHED-------70

SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--NEUROPHYSIOLOGY, BRAIN, PSYCHOLOGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/0966 STEP NO--UR/0243/70/025/001/0016/0022

CIRC ACCESSION NO--AP0130020

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2/2 020 UNCLASSIFIED

CIRC ACCESSION NO--APC130020 PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ISSUE INCLUDED IN THE HEADING OF THIS ARTICLE SHOULD BE DISCUSSED IN THE LIGHT OF THE CHANGES THAT HAVE OCCURRED IN THIS SCIENCE IN THE LAST 20 YEARS. IN THE EARLY 1950'S, THERE WAS AN UNDESIRABLE TREND TO SEPARATE THEORY OF HIGHER NERVOUS ACTIVITY FROM BOTH EXPERIMENTAL PSYCHOLOGY AND GENERAL NEUROPHYSIOLOGY OF THE BRAIN. FOR EXAMPLE, THE CONCEPTS OF "EXCITATION" AND "INHIBITION IN GENERAL" WHICH ARE BASIC TO THIS THEORY BECAME INCREASINGLY HARD TO COMPARE WITH CONCRETE NEUROPHYSIOLOGICAL DATA PERTAINING TO THE DIVERSE MECHANISMS OF EXCITATION AND INHIBITIONS OF NEURONS, SPECIALIZED SUBCORTICAL STRUCTURES WITH A PRIMARILY ACTIVATING OR DEACTIVATING (INHIBITORY) INFLUENCE ON THE HIGHER BRANCHES OF THE BRAIN. THE SWITCHOVER, IN ALMOST ALL OF THE PHYSIOLOGICAL INSTITUTIONS, TO INVESTIGATION OF CONDITIONED REFLEXES WAS NOT ASSOCIATED WITH PENETRATION INTO THE DEEP BASES OF HIGHER NERVOUS ACTIVITY, WHILE GENERAL NEUROPHYSICAL RESEARCH BEGAN TO LAG VISIBLY FROM THE LEVEL OF INTERNATIONAL SCIENCE. FACILITY: INSTITUTE OF HIGHER NERVOUS ACTIVITY AND NEUROPHYSIOLOGY, USSR ACADEMY OF MEDICAL SCIENCES, MOSCOW.

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USSR

UDC: 532.593

KOZIN, N. S. and SIDONOV, V. A., Novosibirsk

"Interaction of a Shock Wave With a Wedge-Shaped Cavity"

Novosibirsk, Fizika Goreniya i Vzryva, Vol 9, No 4, Jul-Aug 73, pp 551-558

Abstract: The authors study the theoretical and experimental aspects of a problem associated with the incidence of a shock wave on a wedge-shaped cavity in metal. Formulas are derived which make it possible to calculate the free surface form of the wedge-shaped cavity at some moment in time t. The solution to the problem on the collapse of the wedge-shaped cavity appears to be self-similar, since the characteristic linear dimension does not enter into the determining parameters. It is shown that the nature of the change in wave length is close to self-similar with a dependence on the distance x and with a nonlinear dependence on the angle gamma. Wave amplitude change is more complex. Flow with jet formations is studied. It is shown that the constant thickness of the jet makes it possible to conclude that the jet is formed by metal particles which are located in a narrow surface layer of constant thickness. Metal ductility is most likely responsible for stabilizing the dimension of this layer. A Reynolds number is given for the collapse process in the event that the viscosity factor is the determining parameter.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

UDC 621.565.83:428.84

GANIN, YE. A., KARICHEV, Z. R., LEBEDEV, V. F., RATNER, V. M., RAYETSKIY, A. S., SIMONOV, V. A.

"Experimental Thermoelectric Air Conditioner"

Moscow, Kholodil'naya tekhnika, No. 9, Sep 71, pp 12-15

Abstract: The thermoelectric room air conditioner developed by the authors that has thermobatteries with a coaxial flow of heat and electric current is described. The air conditioner consists of a thermoelectric battery unit, a power supply unit, and a system for automatically maintaining a given temperature level. Air conditioning occurs in the thermoelectric battery unit where the air is heated, cooled and cleaned of dust depending on the operating regime of the batteries. Air from the room is pumped through the battery unit as a result of rarefaction produced by a turbine fan and again enters the room. The hot junctions of the air conditioner are cooled by tap water. The thermoelectric battery unit consists of 24 batteries which are fastened in a circle on two bands of brackets forming a complete cylinder, with the internal diameter connected with the input opening of the turbine. The semiconducting materials of the thermocouples were the trinary alloys Bi Te Sb and Bi Te Se which are widely used in thermo-

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USSR

GANIN, YE. A., et al, Kholodil'naya tekhnika, No. 9, Sep 71, pp 12-15

electric refrigeration devices. The power supply of the thermobatteries was 220 amp and was chosen on the basis of their maximum cold productivity which was 90-100 kcal/hr. Tests showed that for a water temperature of 20°C and an air temperature of 25°C, the refrigeration capacity of the air conditioner was about 2200 kcal/hr. This required a power of 3.2 kW and the air was cooled in the conditioner to 9°C. When the air conditioner was used as a heat pump, tests showed that for temperatures of the cooling order of 6°C and air temperatures of 12°C, the amount of heat obtained was approximately 3100 kcal/hr. The air conditioner weighed about 100 kg. It is noted that despite the greater requirement for electrical energy as compared with compression air conditioners, the cost of using thermoelectric conditioners may be lower since the necessity for expensive maintenance and capital repairs is avoided.

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1/2 015 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--IMPROVING PUBLIC HEALTH ECONOMICS -U-

AUTHOR-(03)-KURIYANOV, M.K., GALITSKAYA, YE.P., SIMONOV, V.A.

COUNTRY OF INFO--USSR

SOURCE--GOR'KIY; MOSCOW, SOVETSKOYE ZDRAVOOKHRANENIYE, RUSSIAN, NO 3, 1970, PP 14-17

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, BEHAVIORAL AND SOCIAL SCIENCES

TOPIC TAGS--PUBLIC HEALTH, ECONOMIC DEVELOPMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0673 STEP NO--UR/0753/70/000/003/0014/0017

CIRC ACCESSION NO--AP0132796

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2/2 015 UNCLASSIFIED

CIRC ACCESSION NO--AP0132796 PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ECONOMIC REFORM BEING CARRIED OUT IN OUR COUNTRY ALSO AFFECTS THERAPEUTIC AND PREVENTIVE MEDICAL ESTABLISHMENTS TO A CONSIDERABLE EXTENT. IN ACCORDANCE WITH ORDER NO 265 OF THE MINISTER OF HEALTH USSR, DATED 31 MARCH 1967, AN EXPERIMENT IS BEING CONDUCTED IN A NUMBER OF MEDICAL ESTABLISHMENTS INVOLVING EXPANSION OF THE RIGHTS OF THEIR DIRECTORS AND INTRODUCTION OF THE PRINCIPLES OF ECONOMIC INCENTIVES TO STIMULATE THE WORK OF PERSONNEL DIRECTED TOWARD RAISING THE QUALITY AND EFFECTIVENESS OF MEDICAL SERVICE, TOWARD DISCOVERY OF INTERNAL POTENTIAL IN USE OF THE WORK OF MEDICAL PERSONNEL, IN EXPENDITURE OF FINANCIAL AND MATERIAL RESOURCES, AND ALSO CREATION OF A FUND FOR MATERIAL INCENTIVES OF STAFF MEMBERS FOR THE HIGH QUALITY OF THEIR WORK.

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USSR

SIMONOV, V. D., GERASIMOVA, A. I., POLUEKTOVA, Z. M., et al.,

"Analytical Method for the Reaction Mixture of the Condensation Stage in Production of Phenoxyacetic Acid"

V sb Khim. sredstva zashchity rast. (Chemical Plant Protective Agents) Moscow vyp 3, 1973, pp 144-148 (from RZh-Khimiya, No 20, Oct 73, Abstract No 20N520)

Translation: The quantitative determination method for phenol (I) and phenoxyacetic acid (II) is based on potentiometric titration in a nonaqueous medium. Initially I and II are extracted from the reaction mixture by a solvent mixture of Et_2O and dibutylphtallate (85:15). DMFA was the best solvent for the titration, the titrating agent consisted of 0.1 N solution of tetraethylammonium hydroxide in isopropyl alcohol. A blank run performed under analogous conditions determined the content of free amines present in DMFA. The relative error in determining II in artificial mixtures is ± 1%, of the phenol ± 7%.

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USSR

UDC: 632.95

SIMONOV, V. D., IVANOV, A. V., ZAYNAGABUTDINOV, S. A., KRASHENINNOKOVA, O. S., Ufa Affiliate of the All-Union Scientific Research Institute of Chemical Agents for Plant Protection

"A Method of Making Tetrachloroglutaconic Acid and Tetrachloro-4-Cyclopentene-1,3-Dione"

USSR Author's Certificate No 345125, filed 14 Sep 70, published 9 Aug 72 (from RZh-Khimiya, No 10, May 73, abstract No 10N583P by N. V. Lebedeva)

Translation: Tetrachloroglutaconic acid (I) and tetrachloro-4-cyclopentadione-1,3 (II) are synthesized by reacting octachlorocyclopentene (III) or hexachlorocyclopentene with Cl_2 in HSO_3Cl at 100-150°C. Example: Cl_2 is bubbled through a mixture of 1 mole of III and 4 moles of HSO_3Cl at a rate of 30 l/hr with the application 1 of heat at 145°C for 10 hours; after cooling the reaction mass is poured over ice and filtered, giving 0.455 mole of I, melting point 107-8°C(chloroform). An organic layer (127 g) is treated with 200 g or 100% H_2SO_4, the mixture is held for 7 hours at 105°C, poured over

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

SIMONOV, V. D., et al., USSR Author's Certificate No 345125, filed 14 Sep 70, published 9 Aug 72

ice and filtered, yielding 0.4 mole of II, melting point 64-5°C (heptane). Compounds I and II can be used as fungicides, herbicides, and also in the synthesis of unsaturated self-quenching polyester resins.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

SIMONOV, V. D., CHERNOVA, L. N., YASMAN, YA. B. UDC 632.95

"Method of Obtaining Perchlorated Cyclic Hydroxyketonitriles"

USSR Author's Certificate No 301328, filed 15 Dec 69, published 9 Jul 71 (from RZh-Khimiya, No 6 (II), Jun 72, Abstract No 6N547)

Translation: The biologically active compound -- 2,3-dichloro-5-cyano-2-cyclopenten -1-ol-4-one (I) -- is obtained by the reaction of perchlorated cyclopentenedione containing a dichloromethylene group with excess gaseous NH_3 in an organic solvent. The gaseous NH_3 was passed with mixing for 30 minutes into a solution of 2.46 grams of 2,3-dichloro-5-(dicloromethylene)-2-cyclopentene-1,4-dione in 70 ml of C_6H_6. The precipitate was filtered, washed with C_6H_6 and dried; then it was dissolved in 15 ml of 10% HCl (acid) and extracted with ether. The ether extracts were dried over $CaCl_2$, evaporated and 2.45 grams of I was isolated, melting point of 53-6° (after recrystallization from the $CHCl_3$/ether, melting point of 56.5-58°), and a molecular weight of 500-520 (titration with alkali and cryoscopy in dioxane). On dehydration, the I-enol converts to the ketone form with a melting point of 118-120°. I is well soluble in water (pH 1.5). It forms salts with NH_3, Et_3N and metals.

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USSR

UDC 632.95

STONOV, L. D., SERGEYEVA, T. A., SIMONOV, V. D., SHOGAM, S. M., RADTSEV, V. S., and TITOVA, L. M.

"Yalan -- New Herbicide for Control of Echinochloa Weeds in Rice Plantings and Wild Oats in Wheat Plantings"

V sb. Khim. sredstva zashchity rast. (Chemical Plant Protectants -- collection of works), Vyp 1, Moscow, 1970, pp 174-179 (from RZh-Khimiya, No 13, 10 Jul 72, Abstract No 13N518 by T. A. Belyayeva)

Translation: Yalan (I) is a highly effective soil herbicide for the control of millet weeds in rice plantings. Tests have been made of a 60-percent emulsion concentrate and a 10% granulated preparation of I. The herbicidal action of I in the soil persists for 50-100 days. Before rice is planted, I is applied and worked in by harrow in doses of 2-6 kg/ha. For wild-oat control, I is applied in doses of 3-6 kg/ha before wheat is planted.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

UDC 632.95

SIMONOV, V. D., IVANOV, A. V., and TSYPLENKOV, A. A.

"A Means of Obtaining Tetrachloromuconic Acid"

USSR Author's Certificate No 307079, filed 8 Sept 69, published 10 Sept 71 (from Referativnyy Zhurnal -- Khimiya, No 10(II), 1972, Abstract No 10N506 by T. A. Belyayeva)

Translation: Tetrachloromuconic acid (I), melting point 204-6°, is obtained by oxidation of decachloro-1,5-hexadiene (II) or decachloro-2,4-hexadiene concentration H_2SO_4 at 110-115° for 4-5 hours. A mixture of 42,7g II and 200 g 93.3% H_2SO_4 is kept for 4-5 hours at 110°, the reaction mass is poured into water at 20-30° (volume of water = 0.5 the volume of the reaction mass), filtered, and the precipitate is washed with $CHCl_3$, obtaining 23 g I, which is dissolved in ether and purified with activated carbon. The solution is then dried over $MgSO_4$, evaporated and the residue is recrystallized from a mixture of ether and benzene. Molecular weight of the dimethyl ester of I is 306.

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USSR

SIMONOV, V. D., SHAKIROVA, A. M., and SAVKOVA, N. Ya.

"Reaction of 3,4-Chloroaniline with Certain Chlorocarboxylic Acids"

Dokl. Neftikhim. Sektsii. Bashkir. Resp. Pravl. Vses. Khim. O-va im. D. I. Mendeleyeva [Works of Petrochemical Section, Vashkir Republic Administration of All-Union Chemical Society imeni D. I. Mendeleyev], Vol 6, 1971, pp 362-364. (Translated from Referativnyy Zhurnal Khimiya, No 5, Moscow, 1972, Abstract No 5N675 by G. V. Kuznetsova)

Translation: The reaction of 3,4-$Cl_2C_6H_3NH_2$ (I) with chlorocarboxylic acids is studied. When equilomolar quantities of I and $ClCH_2COOH$ or MeCHCl COOH are boiled in PhMe with azeotropic removal of water for 10 hours, the corresponding anilides were produced: 3,4-$Cl_2C_6H_3NHCOCH_2Cl$, $C_8H_6Cl_3NO$, mp 100-1° (iso-C_8H_{20}); and 3,4-$Cl_2C_6H_3NHCOCHClMe$, $C_9H_8Cl_3NO$, yield 49.4%, mp 123-4° (iso C_8H_{20}). The anilide is not formed of I and pentachloropentadienic acid under similar conditions, but only the 3,4-dichloroaniline salt of the acid, $C_{11}H_6Cl_7NO_2$, was produced, yield 73.6%, mp. 101.5-2.5° (benzene). CCl_2= $CClCOOH$ reacts similarly, producing the 3,4-dichloroaniline salt, $C_9H_6Cl_5NO_2$, yield 34.6%, mp 115-8" (benzene). 3,4-$Cl_2C_6H_3N$=$CHCCl$=$CClCONHC_6H_3$ Cl_2-3,4, $C_{16}H_7Cl_3N_2O$, is produced, mp 223°. The anilides and salts produced are potential herbicides.

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USSR

SIMONOV, V. D., GAZIZOV, R. T., IVANOV, A. V.

"Synthesis of Cyclical Perchlorinated Pentenes"

Dokl. Neftikhim. Sektsii. Bashkir. Resp. Pravl. Vses. Khim. O-va im. D. I. Mendeleyeva, [Works of Petrochemical Section, Vashkir Republic Administration of All-Union Chemical Society imeni D. I. Mendeleyev], Vol 6, 1971, pp 317-319. (Translated from Referativnyy Zhurnal Khimiya, No 4, Moscow, 1972, Abstract No 4N684 by T. A. Belyeva).

Translation: A method is developed for production of octachlorocyclopentene (I) initiated by chlorination of hexachlorocyclopentadiene (II) or octachloro-1, 3-pentadiene in a medium of HSO_3Cl (III). Cl_2 is passed (22.3 l/hr) through a mixture of 81.9 g II and 140 g III at about 20° for 5 hrs. The temperature of the reaction mixture is 40-45°. It is cooled to +10° and I is filtered off, mp 37-8°. 8.16 g of hexachlorofulvene is treated with 26.4 g III at 0±2° for 80 minutes, producing 10 g of percholoromethylene-Δ^3-cyclopentene.

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USSR

SIMONOV, V. D., GAZIZOV, R. T., MAMINA, F. A., SHARIF'YANOVA, L. N.

"Chromatographic Determination of Cyclical Carbon Chlorides and Their Carbocyclical Derivatives"

Dokl. Neftikhim. Sektsii. Bashkir. Resp. Pravl. Vses. Khim. O-va im. D. I. Mendeleyeva, [Works of Petrochemical Section, Vashkir Rebpulic Administration of All-Union Chemical Society imeni D. I. Mendeleyev], Vol 6, 1971, pp 320-323. (Translated from Referativnyy Zhur-al Khimiya, No 4, Moscow, 1972, Abstract No 4N652 by I. A. Revel'skiy).

Translation: A mixture of thymol, perchloromethylene-3-cyclopentene, hexacholofulvene, 2, 3, 4, 4-tetracholoro-5-dichloromethylene-2-cyclo-1-pentenone and 2, 3-dichloro-5-dichloromethylene-2-cyclo-1, 4-pentenedione is separated by GLC with a heat conductivity detector on a combined glass column (160+20× 0.4 cm), the first section of which contains silanized celite 545 with 15% polyethylene glycoladipate, while the second contains the same carrier with 10% type SE-30 methyl silicone, at a temperature of 190° and a He gas carrier rate of 90 ml per minute.

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USSR

SIMONOV, V. D., IVANOV, A. V., GAZIZOV, R. T., NEDEL'CHENKO, V. M., KHRENOVA, N. N.

"Method of Producing Octachlorocyclopentene"

USSR Author's Certificate No 303312, filed 6/01/69, published 28/06/71. (Translated from Referativnyy Zhurnal Khimiya, No 4, Moscow, 1972, Abstract No 4N591P by T. A. Belyaeva).

Translation: Octachlorocyclopentene (I), intermediate product for synthesis of pesticides, is produced by chlorination of hexachlorocyclopentadiene (II) or octachloropentadiene in a medium of chlorosulfonic acid (III) at a temperature of 40-45°. Cl_2 gas is passed through a mixture of 81.9 g II and 140 g III for 5 hr at 40-45°, gas temperature about 20° (2.3 l/hr). It is then cooled to 10°, filtered, the precipitate is washed with water, dried in air, producing I, m. p. 37-8°. III is returned to the process.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

SIMONOV, V. D., VORONOV, A. A.

"Use of Clatrate Compounds of Urea with Surfactants in the Production of Pesticides"

Dokl. Neftikhim. Sektsii. Bashkir. Resp. Pravl. Vses. Khim. O-va im. D. I. Mendeleyeva, [Works of Petrochemical Section, Vashkir Republic Administration of All-Union Chemical Society imeni D. I. Mendeleyev], Vol 6, 1971, pp 326-329. (Translated from Referativnyy Zhurnal Khimiya, No 4, Moscow, 1972, Abstract No 4N648 by S. E. Lyubarskaya).

Translation: The introduction of paste surfactants as clatrates (I) with urea to powdered pesticide preparates facilitates mixing and improves the distribution of surfactants in the preparate (stability factor of aqueous suspensions constant). I of surfactants with the formula $R(OCH_2CH_2)_nOH$ (II) (R=mono or dialkylphenol, n is number of oxy groups) and urea (III) with a ratio II:III=1:2-3 (n=7-10) is produced by mixing II with III cold, then fusing 1-1.5 hr at 135-40°, mixing at this temperature 1-1.5 hr, cooling and holding until solidified. Best for mixing are I containing up to 20% surfactants (solidify in 2-3 days). I were used for preparation of 50% wetting powders of methaldehyde, EP-1 fungicide and pyramine.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

SIMONOV, V. D., SEMENOV, V. A., FOMINYKH, M. V.

"Polarographic Determination of Tetrachloromuconic Acid Isomers"

Dokl. Neftikhim. Sektsii. Bashkir. Resp. Pravl. Vses. Khim. O-va im. D. I. Mendeleyeva, [Works of Petrochemical Section, Vashkir Republic Administration of All-Union Chemical Society imeni d. I. Mendeleyev], Vol 6, 1971, pp 339-345. (Translated from Referativnyy Zhurnal Khimiya, No 4, Moscow, 1972, Abstract No 4N694 by N. S. Ivanova).

Translation: Polarographic studies of cis-cis (I) and trans-trans (II) isomers of tetrachloromuconic acid in different electrolytes (0.1) n. $HClO_4$ and 0.1 M LiCl) showed: a) I is more easily reduced than II; b) di-ME I is adsorbed more easily than di-ME II. A method is suggested for pological analysis of II in the reaction mass as it is produced.
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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

SIMONOV, V. D., IVANOV, V. I.

"The Economic Factor in Determining Optimal Chlorination Conditions"

Dokl. Neftekhim. Sektsii. Bashkir. Resp. Pravl. Vses. Khim. o-va im. D. I. Mendeleyeva [Reports of Petrochemical Section, Bashkir Republic Administration of All-Union Chemical Society imeni D. I. Mendeleyev], No 6, 1971, pp 295-300 (Translated from Referativnyy Zhurnal, Khimiya, No 3, 1972, Abstract No 3N586 by N. S. Ivanova).

Translation: A dependence is concluded for processes of exhaustive chlorination of C_4 and C_5 hydrocarbons in an acid fluidized bed, particularly for the process of production of hexachlorobutadiene, relating the cost of the product with the degree of conversion of the material and the height of the reactor.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

UDC 632.95

BASHILOV, YU. A., DAUKSHENKO, L. A., NEL'NIKOV, N. N., SVIRIDOVA, P. I., STONOV, L. D., SIMONOV, V. D., SHVINDLERMAN, G. S., SHCHERBATYKH, YU. I.

"Meturin -- a New Herbicide for Cotton and Potatoes"

V sb. Khim. sredstva zashchity rast. (Chemical Agents for Plant Protection -- collection of works), vyp. 1, Moscow, 1970, pp 179-187 (from RZh-Khimiya, No 11, Jun 72, Abstract No 11N446)

Translation: A new herbicide -- meturin (I) (N-phenyl-N-hydroxy-N'-methylurea) -- was synthesized. The compound can be produced with a high yield by reacting phenylhydroxylamine with MeNCO. Treatment of vegetating plants with I is not highly effective. The best results are obtained when the herbicide is introduced into the soil before planting. As a rule, dicotyledons are more effectively suppressed by I than monocotyledons. Highly sensitive to I (70-100% inhibition of growth from a dose of 0.5 kg/hectare) are corn marigold, sheep sorrel, wild beets, pigweed, wild rice, buckwheat, soybeans, tomatoes, cabbage, cucumbers, radishes, clover and alfalfa. Sensitive to I (70-100% death from a dose of 1.5 kg/hectare) are field pennycress, field wintercress, barley grass, beans, vetch, carrots, beets and flax. Moderately sensitive (complete control with a dose of 3 kg/hectare) are oats, wheat, corn

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

BASKAKOV, YU. A., et al., V sb. Khim. sredstva zashchity rast., vyp 1, Moscow, 1970, pp 179-187

beans, seed onions, and sunflowers. Rough snakeweed is among the weeds resistant to I, while potatoes and cotton are resistant crops. The compound retains high activity throughout the entire vegetative period in the upper layer of soil (0-5 cm). The activity of the herbicide begins to decline within 2 months after introduction in the lower and middle layers of soil. In doses of 3-4.5 kg/hectare, I destroyed 70-90% of the annual weeds in cotton fields, but in some instances caused temporary chlorosis in a dose of 4.5 kg/hectare. In potato fields, the compound in doses from 2 to 3 kg/hectare destroyed annual weeds throughout the entire season, which meant that potatoes could be grown without hilling. The compound has low toxicity for human beings. It is authorized in the Soviet Union for experimental production use on potatoes.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

UDC 632.95

SIMONOV, V. D. MAMINA, F. A., GERASIMOVA, A. I., ALYAMKIN, YU. N., AKHUNOV, T. F., and VYAZOVKINA, G. I.

"Determination of the Basic Substance in Herbicidal Preparations of Yalan"

V sb. Probl. analit. khimii (Collection of Works: Problems of Analytical Chemistry), Vol 2, Moscow, Nauka, 1972, pp 138-142 (from Referativnyy Zhurnal -- Khimiya, Svodnyy Tom, No 23(II), 1972, Abstract No 23N449 by T. A. Belyayeva)

Translation: The application of gas chromatography, spectroscopic, and titrimetric methods to determination of the basic substance in the oil emulsion and granulated preparations of yalan was evaluated. Using a thermal conductivity detector, the gas chromatography is carried out at the column temperature of 190°C, with the gas carrier (H_2) flow rate of 240 ml./min. Heat-insulating silanized brick is used the solid phase apiezon M with stearic acid is used as an immobile liquid phase. The relative error of determination does not exceed 3.4%. A study of the IR yalan spectra and of accompanying components indicated that the band 1412 cm^{-1} can be used successfully. The titrimetric method is based on the hydrolysis of S-ethyl N-hexamethylenethiocarbamate at 130°C in the presence of 85% orthophosphoric acid followed by determination of the imine formed with the acid-alkaline titration (0.1 N solution of H_2SO_4 with methyl red indicator). The determination error does not exceed 1.6%.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

UDC 629.7.036.3:533.6

VALUYEV, N. I., DINEYEV, Yu. N., SIMONOV, V. I.

"Some Results of an Experimental Study of the Operation of a Small-Scale Axial Turbine With a Bladeless Nozzle Device"

Sb. nauch. tr. Kiyev. in-t inzh. grazhd. aviatsii (Collection of Scientific Works of Kiev Institute of Civil Aviation Engineers), 1971, No. 2, pp 120-122 (from RZh - 34. Aviatsionnyye i raketnyye dvigateli, No 9, Sep 72, Abstract No 9.34.59)

Translation: Comparative results are presented on tests of two small-scale axial turbines with bladeless nozzle devices and having the same mode and geometrical parameters but differing in the shape of the flow-through portion of the spiral chambers. 3 ill., 3 ref. Resume.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

1/2 033 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--TECHNOLOGICAL TREATMENT OF A MOLTEN METAL BY POWDERED MATERIAL -U-

AUTHOR-(05)-SIMONOV, V.I., KOSYREV, L.K., FILIPPOV, A.F., PRYANISHIKOV, I.S., KABANOVA, N.F.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UNCHEB. ZAVED., CHERN. METAL. 1970, 13(1) 52-5

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--LIQUID METAL, CALCIUM FLUORIDE, CALCIUM OXIDE, PHOSPHORUS CONTAINING ALLOY, STEEL, POWDER METAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0962 STEP NO--UR/0148/70/013/001/0052/0055

CIRC ACCESSION NO--AT0105831

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

2/2 * 033 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AT0105831

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DEPHOSPHORIZATION OF STEEL CONTG. P 0.03-0.1, C 0.12-1.09, AND MN 0.07-0.15 WT. PERCENT WAS CARRIED OUT IN A 40 KG INDUCTION FURNACE WITH BASIC CRUCIBLE BY MEANS OF A POWDER OF CAO AND CAF SUB2 (RATIOS 9:1, 4:1, AND 3:1) BLOWN THROUGH THE MOLTEN METAL IN A GAS SUSPENSION. NO INCREASE IN N OR O CONTENT WAS OBSD.; ON THE CONTRARY, THE GAS CONTENT OF THE METAL DECREASED DURING THE BLOWING WITH THE POWDERS. THE BEST DEPHOSPHORIZATION CONDITIONS WITH CAO-CAF SUB2 MIXTS. OCCURRED WITH THE MIXT. CAO:CAF SUB2 EQUALS 4:1 AND THE WORST AT A RATIO 3:1. THE ADDN. OF FEO TO THESE MIXTS. DID NOT INCREASE THE DEPHOSPHORIZATION DEGREE; HOWEVER, THE REPLACEMENT OF A PART OF THE CAO BY BAO IMPROVED THE DEPHOSPHORIZATION, SO THAT WITH CAO-BAO-CAF SUB2 EQUALS 3:1:1 THE FINAL P CONCN. WAS 0.008-0.005 WT. PERCENT.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

UDC 548.736.6

RASTSVETAYEVA, R. K., SIDONOV, V. I., and ACADEMICIAN BELOV, N. V., Institute of Crystallography, USSR Academy of Sciences, Moscow

"Crystal Structure of Lomonosovite $Na_5Ti_2[Si_2O_7][PO_4]O_2$"

Moscow, Doklady Akademii Nauk SSSR, Vol 197, No 1, 1 Mar 71, pp 81-84

Abstract: Lomonosovite was discovered in 1936 by V. I. Gerasimov. Although considerable research has been devoted to the properties of this mineral, the results have remained largely unsatisfactory. The present research resulted in only slightly changed parameters for the triclinic unit cell of lomonosovite: a = 5.44, b = 7.163, c = 14.83 Å, $\alpha = 99^\circ$, $\beta = 105^\circ$, and $\gamma = 90^\circ$. The authors describe the structure of lomonosovite in detail and illustrate schematically in two figures the projection of the lomonosovite structure on the zz and yz planes in Pauling polyhedra. They describe the leaching out of lomonosovite and the problems involved therein. The basic structure of lomonosovite places it in the same series as several other minerals, but it differs from these minerals with respect to filling of the space between the walls. 2 figures, 1 table, bibliography of 17 titles.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

UDC 548.735.46

GOLYSHEV, V. M., SIMONOV, V. I., and BELOV, N. V., Institute of Crystallography, USSR Academy of Sciences

"Symmetry of Functions Separating the Structure From the Patterson Distribution"

Moscow, Kristallografiya, Vol 16, No 4, Jul-Aug 71, pp 703-707

Abstract: The authors have compiled tables of symmetry groups of functions separating the second rank as a function of symmetry of functions of interatomic vectors and type of displacement vector. They show that the separation function, which is constructed by using vectors of a fixed elementary atom of the structure up to all other atoms associated with it by the elements of the group symmetry, possesses a symmetry that is no less than the symmetry of the Fedorov crystal group. Table 1 lists the symmetry of separation functions of the second rank: triclinic, monoclinic, and rhombic symmetry groups of the Patterson function. Tables 2 and 3 give the same functions of second rank, respectively, for tetragonal and hexagonal symmetry groups. Table 4 lists the cubic symmetry groups for the Patterson function of the same rank of separation functions. The article contains 4 tables and a bibliography of 6 titles.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR UDC 666.764.4:669.716:621.74

KARKLIT, A. K., SOKOLOV, A. N., LEBEDEVA, M. F., ZEGZHDA, V. P., Deceased, All-Union Institute of Refractories, SIMONOV, V. N., Leningrad Plant for Processing of Nonferrous Metals, ANDREYEV, V. F., PARTIN, I. A., CHEREPOK, G. V., Kuybyshev Metallurgical Plant imeni V. I. Lenin

"Graphite-Containing Products for Casting of Aluminum Alloys"

Ogneupory, No. 2, 1971, pp 13-15

Abstract: A composition and method of manufacture of graphite-containing refractory products of low heat conductivity for casting of aluminum and aluminum-based alloys have been developed. The reduction in heat conductivity is achieved by introducing asbestos to the mass and using low-temperature (700°C) roasting. The products have shown satisfactory strength in service.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

SIMONOV, V. V., ANISHCHENKO, A. F., and BIKKULOV. A. Z.

"Inertness of Certain Chlorine-containing C_5-cyclic Ketones in the Reaction with Cyclopentadiene"

Dokl. Neftikhim. Sektsii. Bashkir. Resp. Pravl. Vses. Khim. O-va im. D. I. Mendeleyeva [Works of Petrochemical Section, Vashkir Republic Administration of All-Union Chemical Society imeni D. I. Mendeleyev], Vol 6, 1971, pp 309-312. (Translated from Referativnyy Zhurnal Khimiya, No 5, Moscow, 1972, Abstract No 5N607 by T. K. Yudovskaya)

Translation: The chlorinated cyclopent-2-en-1-ones (I) [2,3,4,4,5,5-Cl_6I (a), 2,3,4,4,5-Cl_5-I (b), 2,3,4,4-Cl_4-5-(-CCl_2)-I (c), 2,3,4-Cl_3-5-(-CCl_2)-I (d)] and cyclopent-2-ene-1,4-diones (II) [for example, 2,3,5,5-Cl_4-II (a), 2,3,5-Cl_3-II (b), 2,3-Cl_2-II (c)], are inert in the reaction with cyclopentadiene when it is performed in boiling C_6H_6, PhMe and xylene at atmospheric pressure, while Ia, IIa, Ic, and IIc do not react even at high pressures and temperatures of 180-200°. It is assumed that this inertness results from spatial effects.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR UDC

SIMONOV, V. V., ANISHCHENKO, A. F., BIKKULOV, A. Z.

"Interaction of Certain C_5-Cyclical Chlorocarbons with Cyclopentadiene"

Dokl Neftekhim. Sektsii. Bashkir. Resp. Pravl. Vses. Khim. O-va Im., D. I. Mendeleyeva, [Works of Petrochemical Section of Bashkir Republic Administration of All-Union Chemical Society imeni D. I. Mendeleyev], Vol 6, 1971, pp 313-316. (Translated from Referativnyy Zhurnal Khimiya, No 4, Moscow, 1972, Abstract No 4H584, by S. Ye Lyubarskaya).

Translation: It was established in a study of the reaction of cyclopentadiene (CPD) with three dienophils -- hexachlorofulvene (I), octachlorocyclopentene (II) and perchloromethylene-Δ^3-cyclopentene (III) that II and III under the conditions studied do not react with CPD. I, when boiled in C_6H_6 (10 hr) forms an adduct (IV), m. p. 122-3° (ethanol). Two structures are assumed for IV, based on reaction I as a dienophil. The possibility of reaction I as a diene like the behavior of hexachlorocyclopentadiene in the reaction with CPD is improbable, since I forms no adduct with maleic anhydride under various conditions. The structure of 4 is not established.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

UDC: 541.15+539.163

SIMONOV, Yu. F., Department of Radiochemistry, Moscow State University; Institute of Physical Chemistry, Academy of Sciences USSR

"Hot Synthesis" of Tritiated Aminoacids"

Moscow, Vestnik Moskovskogo Universiteta, Seriya II, Khimiya, no. 6, vol. 11, Nov-Dec 70, pp 739-740

Abstract: A study has been made of the dependence of the radiochemical yield of aminoacid on irradiation time, on the basis of an optimum ratio of components being irradiated (parent substance-lithium salt). The specimens, containing a mixture of glutamic acid and lithium carbonate, were irradiated with a flux of slow neutrons at $0.87 \cdot 10^{-13} cm^{-2} \cdot sec^{-1}$ for 15 min and 1, 7, 15, 50 and 100 hours. From the data shown it follows that the changes in radiation conservation and specific activity are of an exponential nature and that irradiation time affects to a greater degree the radiation conservation than the specific activity of glutamic acid. As a result, maximum radiochemical yield of glutamic acid will be attained at irradiation within the time interval of 1-15 hours. It should be noted, however, that the optimum irradiation time range may vary depending on the structure of the aminoacid. In that case the determining factor will be the radiation.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

USSR

SIMONOV, YE. F., Vestnik Moskovskogo Universiteta, Seriya II, Khimiya, No 6, Vol 11, Nov-Dec 70, pp 739-740

resistance of the parent molecule and space factors in bombardment of C-H bonds by the tritium atoms. The radiolysis spectra of simple aminoacids, as a rule, reveals alanine in quantities comparable and sometimes exceeding that of the parent substance. In irradiating ornithine for seven hours with a flux of $2 \cdot 10^{12}$ neut./cm^2·sec, its conservation was only 13%, while the yield of α-alanine was 44.5% and that of α-aminobutyric acid -- 25.1%. The specific activities were 0.20; 0.35 and 0.36 microcurie/mg, respectively. "Hot synthesis" of tritiated aminoacids has serious limitations, with respect to irradiation time, which prevents the emergence of the high specific activities of the parent compound. Its suitability for use is defined by the impossibility or an undue complexity of making the aminoacids by conventional chemical synthesis.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

1/2 019 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--ACTIVITY OF CERTAIN BLOOD SERUM ENZYMES IN RATS DURING A PROLONGED HYPOKINESIA -U-

AUTHOR-(02)-SIMONOV, YE.YE., FEDOROV, I.V.

COUNTRY OF INFO--USSR

SOURCE--KOSMICHESKAIA BIOLOGIIA I MEDITSINA, VOL. 4, JAN.-FEB. 1970, P. 16-18

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HYPODYNAMIA, BLOOD SERUM, ENZYME ACTIVITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0065 STEP NO--UR/0453/70/004/000/0016/0018

CIRC ACCESSION NO--AP0119061

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

2/2 019 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0119061

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDY OF THE ACTIVITY OF GLUTAMATE ASPARAGIN AND GLUTAMATE ALANINE AMINOTRANSFERASES, KETOSO,L,PHOSPHATE ALDOSE, LACTATE DIHYDROGENASE, AND NONSPECIFIC CHOLINE ESTERASE IN THE BLOOD SERUM OF A GROUP OF 39 WHITE RATS SUBJECTED FOR 1, 15 AND 60 DAYS OF HYPOKINESIA. THE ACTIVITY OF ALL THESE ENZYMES WAS HIGHER IN EXPERIMENTAL RATS THAN IN CONTROL RARS DURING THE EARLY STAGE OF HYPOKINESIA AND CONTINUED TO INCREASE (AMINOTRANSFERASES) OR DECREASED (THE REST OF ENZYMES) DURING THE LATER STAGE OF THE EXPERIMENT. THEORIES ARE PROPOSED TO EXPLAIN THESE OBSERVATIONS.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

1/2 015 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--CRYSTAL STRUCTURE OF ANHYDROUS COPPER PROPIONATE -U-

AUTHOR-(02)-SIMONOV, YU.A., MALINOVSKIY, T.I.

COUNTRY OF INFO--USSR

SOURCE--KRISTALLOGRAFIYA 1970, 15(2), 370-1

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CRYSTAL STRUCTURE, ORGANOCOPPER COMPOUND, COPPER COMPLEX

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1995/1409 STEP NO--UR/0070/70/015/002/0370/0371

CIRC ACCESSION NO--AP0116856

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

2/2 015 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0116856

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ANHYD. CU(MECH SUB2 COO) SUB2 FORMS DARK GREEN PRISMS WITH CLEAVAGE PLANES ALONG THE (001) AND (010) PLANES AND LATTICE PARAMETERS ALPHA 5.19, B 8.58, AND C 9.69 PLUS OR MINUS 0.05 ANGSTROM, ALPHA 87DEGREES 50 PRIME, BETA 90DEGREES, GAMMA 75DEGREES. 50 PRIME PLUS OR MINUS 30 PRIME; EQUALS L.71, THE UNIT CELL CONTAINS 2 MOLS. OF CU(MECH SUB2 NEGATIVE COO) SUB2, AND 4 O ATOMS OF 4 CARBOXYL GROUPS AROUND CU. THE SLIGHTLY DISTORTED SQUARE DEVIATES BY DELTA SUB01 EQUALS MINUS 0.007, DELTA SUB2 EQUALS MINUS 0.00 SUB3, DELTA SUB03 EQUALS 0.00 SUB3, AND DELTA SUB04 EQUALS 0.000 ANGSTROM FROM THE PLANE 3.68X MINUS 3.99Y PLUS 4.45Z PLUS 5.03 EQUALS 0. THE 5TH NEIGHBOR OF CU, O(3), COMPLETES THE COORDINATION OF CU BONDED WITH THE BASAL CENTER OF INVERSION AT POINTS ONE HALF, 1, 0, AND FORMS WITH THE 1ST CU ATOM A 2,NUCLEI COMPLEX. FACILITY: INST. PRIKL. FIZ., KISHINEV, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203020010-1

Acc. Nr. AT0050275 Abstracting Service: CHEMICAL ABST. 5/70 Ref. Code UR0020

S

104916f Structure of the complex anion $[Co(SO_3)_2(NH_3)_4]^-$. Ablov, A. V.; Landa, L. I.; Simonov, Yu. A.; Malinovskii, T. I.; Tovbis, A. B. (Inst. Khim., Kishinev, USSR). *Dokl. Akad. Nauk SSSR* 1970, 190(3), 579-81 [Chem] (Russ). X-ray anal. of the dark-brown form of $NH_4[Co(SO_3)_2(NH_3)_4].3H_2O$ indicates that the SO_3 groups are in the cis-position and are bonded to the Co atom through S. The interat. distances and valence angles are tabulated.
C. J. Steinberg

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Organophosphorous Compounds

USSR

UDC 541.621'49:546.733'18'86:547.442.2

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"A New Kind of Stereoisomerism in trans-Dioximines of Cobalt (III) With Triphenylphosphine and Triphenylstibine"

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Abstract: In an earlier publication it was reported that triphenylphosphine, triphenylarsine, and triphenylstibine can easily replace water in trans-acidoaquadioximines of cobalt (III) forming compounds $[CoX(DH)_2EPh_3]$ where X = Cl, Br, or I, and E = P, As or Sb. Furthermore, it was shown that these products occur as mixtures of two modifications. This paper covers x-ray diffraction studies of such compounds. The experimental results obtained show that cobalt (III) dioximines exhibit an unique case of stereoisomerism. Both modifications are in trans-configuration; in one case two chelate units DH are located in a plane, in the other the DH chelate planes are at an angle to each other, the cobalt atom being moved out of the center of the octahedron.

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